PRINTING PRODUCTION

JULY
1958

formerly PRINTING EQUIPMENT *Engineer*

Printing Scientists Seek the Answers (SEE PAGE 5)

DRUPA Exhibition; R&EC, ANPA, LNA Meeting Reports

Some Plain Talk About Nickel-Plating Stereos

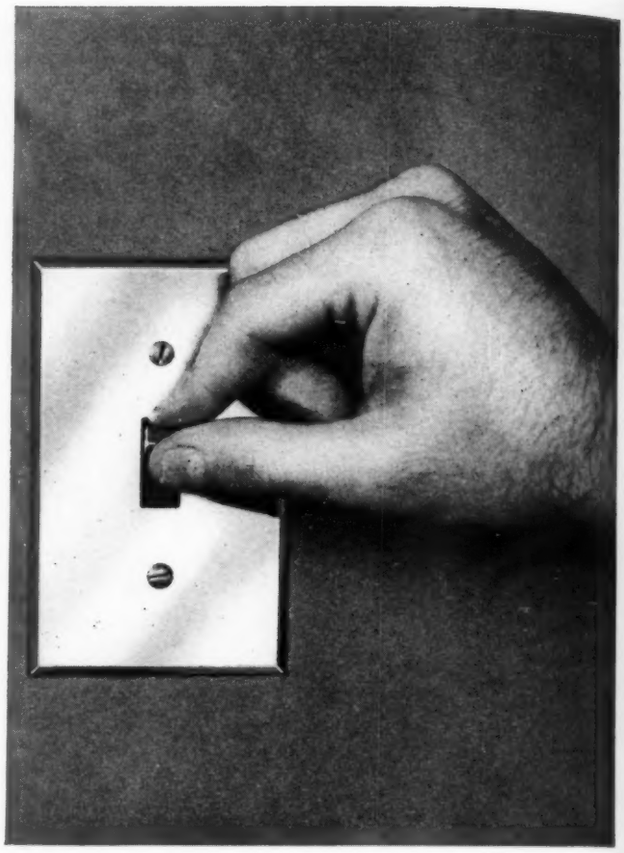
An Introductory to Controlling Printing Quality

Pass On: _____

SERVING PRINTING INDUSTRY
PRODUCTION EXECUTIVES EXCLUSIVELY

The Star Quadder Pump Stop Safety

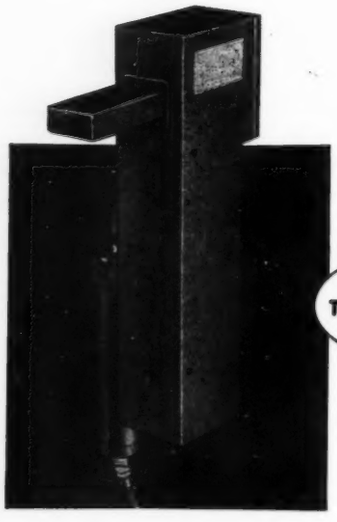
operates as simply as turning on a light!



When you turn on a light, you flip a switch to close a 110 volt circuit to the bulb. Nothing could be simpler or more efficient, and a child, of course, can operate it.

The same is true of the Star Quadder Electro Pump Stop. A switch is closed when a plunger in the left hand vise jaw contacts the line of matrices. This closes a *24 volt* circuit to the pot pump solenoid, allowing the plunger to descend. In case of a mechanical or electrical failure, the Electro Pump Stop "fails safe". That is, the stop remains in a closed position, preventing the plunger from descending. Result – No squirts from loose lines.

The other electrical components of the Star Selectro-Matic Quadder are just as simple and dependable. No specialized knowledge is necessary to keep them in operation.



A 2-color brochure is available for the asking, giving full details of the Selectro-Matic Quadder. Write for your copy today.

Precision TRADE ★ MARK Parts

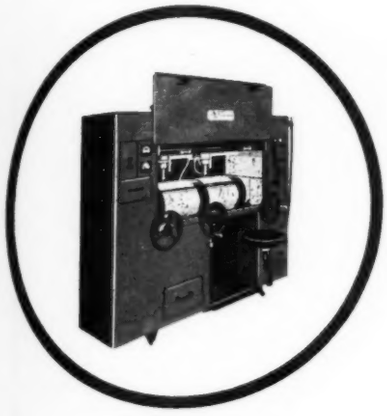
STAR PARTS, Inc.
SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO **AGENCIES:** CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER • SO. ACTON, MASS. • CANADA: PRINTING MATERIAL LTD AND AGENTS OVERSEAS

For More Information Circle 167 on Reader Service Card

Sta-Hi has a curved router to meet your requirements

a model for every newspaper, large or small



STA-HI TWIN-PLATE ROUTER

For volume production of color stereoplates. Routs two identical page plates simultaneously! Has every conceivable automatic feature for fast, precision routing, plus provisions for ease of operation and safety for the stereotyper.

STA-HI MASTER ROUTER

Industry's first totally enclosed curved plate router. Has exclusive Power Operated Traverse for rapid "stripping" of plates. Air Jet Chip Remover, Double Page Matching Attachment, Oil Mist Lubrication System also available for increased efficiency.

STA-HI TUBULAR MASTER ROUTER

Patterned after standard Master Router, but especially designed for rapid, accurate routing of "stovepipe" plates for tubular presses. Features "trigger action" grip mechanism for quickly and securely locking plates on cylinder.

235 West Washington Boulevard, Whittier, California . . .

STA-HI CORPORATION

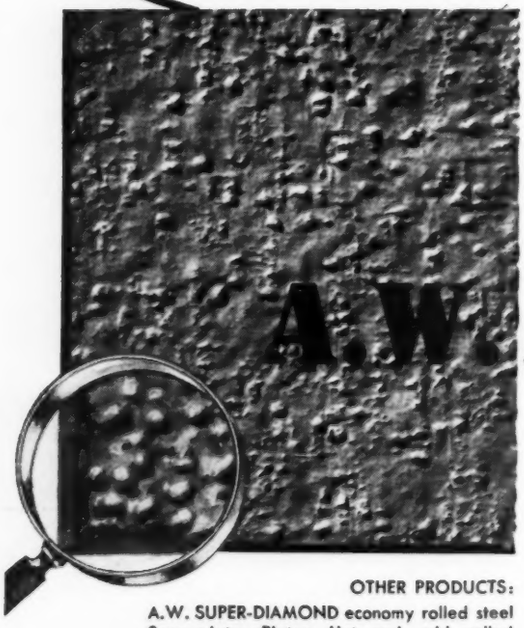
For More Information Circle 165 on Reader Service Card

Abdullah hasn't fallen off once, since he installed A.W. ALGRIP!

Now . . . he can even do aerobatics without ever using a safety belt. Abdullah knows that traction results from friction and that A.W. ALGRIP Rolled Steel Floor Plate provides the best traction possible wherever slipping might occur.

A.W. ALGRIP is made by a patented process in which grinding wheel type abrasive is rolled—*not coated*—to a controlled depth, as an integral part of tough steel floor plate. Wear merely exposes more abrasive . . . safety lasts for the life of the installation.

Check your plant for areas where slipping hazards may exist. A.W. ALGRIP provides supersafe footing under the most hazardous slipping conditions . . . even where water, oil or grease may collect . . . even on inclined surfaces. A.W. ALGRIP can be installed as independent flooring or flooring overlay. Send the coupon for A.W. ALGRIP information, today.



ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—approved for safety by Underwriters' Laboratories

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-E30

Name_____

Title_____

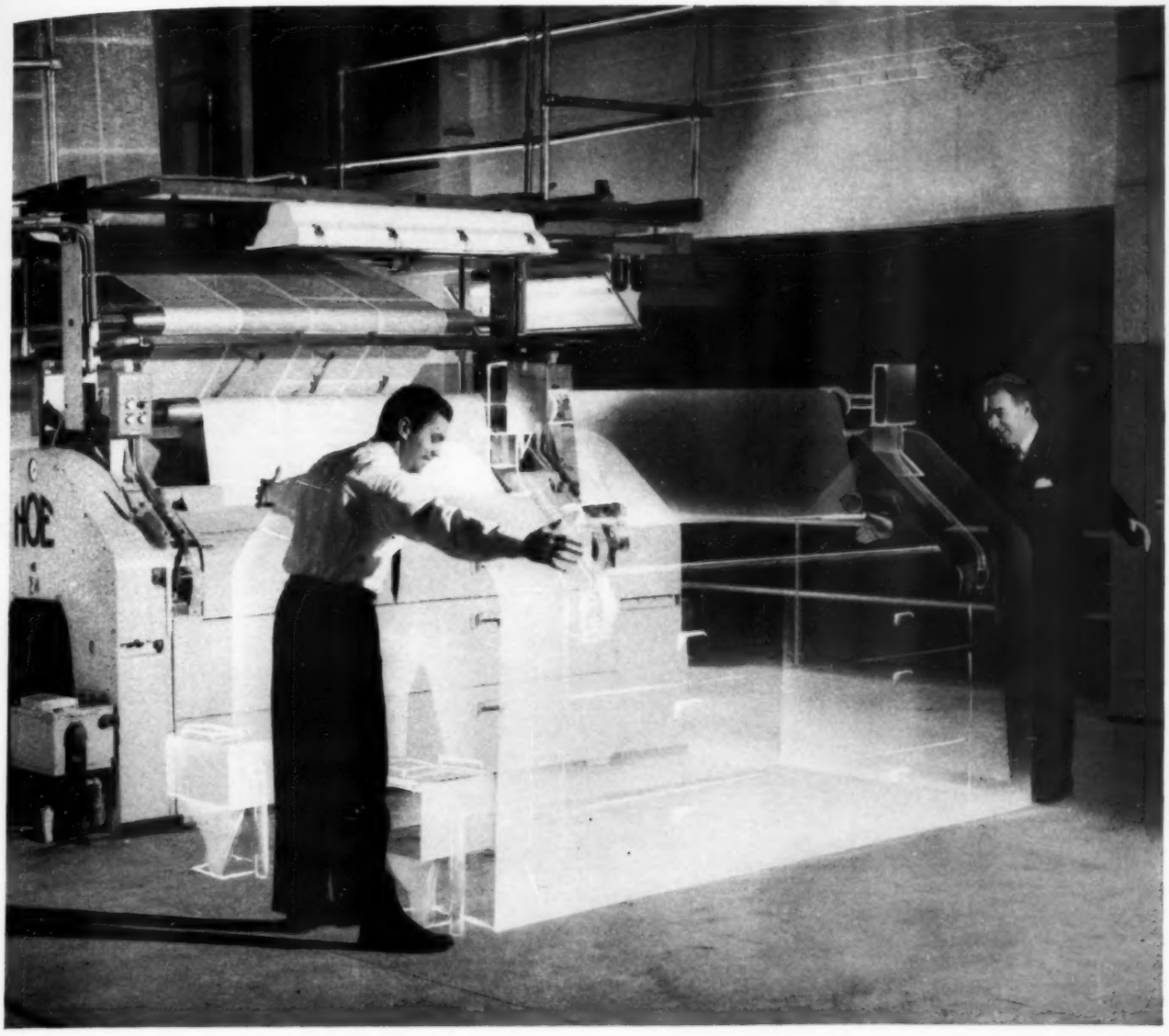
Company_____

Address_____

City_____ Zone_____ State_____

OTHER PRODUCTS:
A.W. SUPER-DIAMOND economy rolled steel floor plate—Plates—Hot and cold rolled sheet and strip—(Alloy and Special Grades)

For More Information Circle 4 on Reader Service Card



The plus of a Hoe press:

AN EXTRA UNIT IN SAVED LINE-SPACE

A pressroom planned with Hoe equipment means smooth, efficient traffic flow at press time ... free, safe aisles ... room to do a job you're proud of. It can also mean the addition of new equipment to the existing lines without nightmares.

Yet nothing is sacrificed in planning Hoe presses for pressroom convenience. All adjustment and operating points are located for safe, easy access. In fact, Hoe equipment has become more and more versatile, until the available features are today's finest examples of advanced design. Hoe's consistent leadership for more than a century and a half produces astonishing efficiency.

Hoe's extensive lines for every kind of pressroom . . . engineered with the kind of precision made possible only by experienced, dedicated craftsmen . . . will help you meet competition for years to come. Hoe service is economical and prompt. *It will pay you to get in touch with Hoe.*

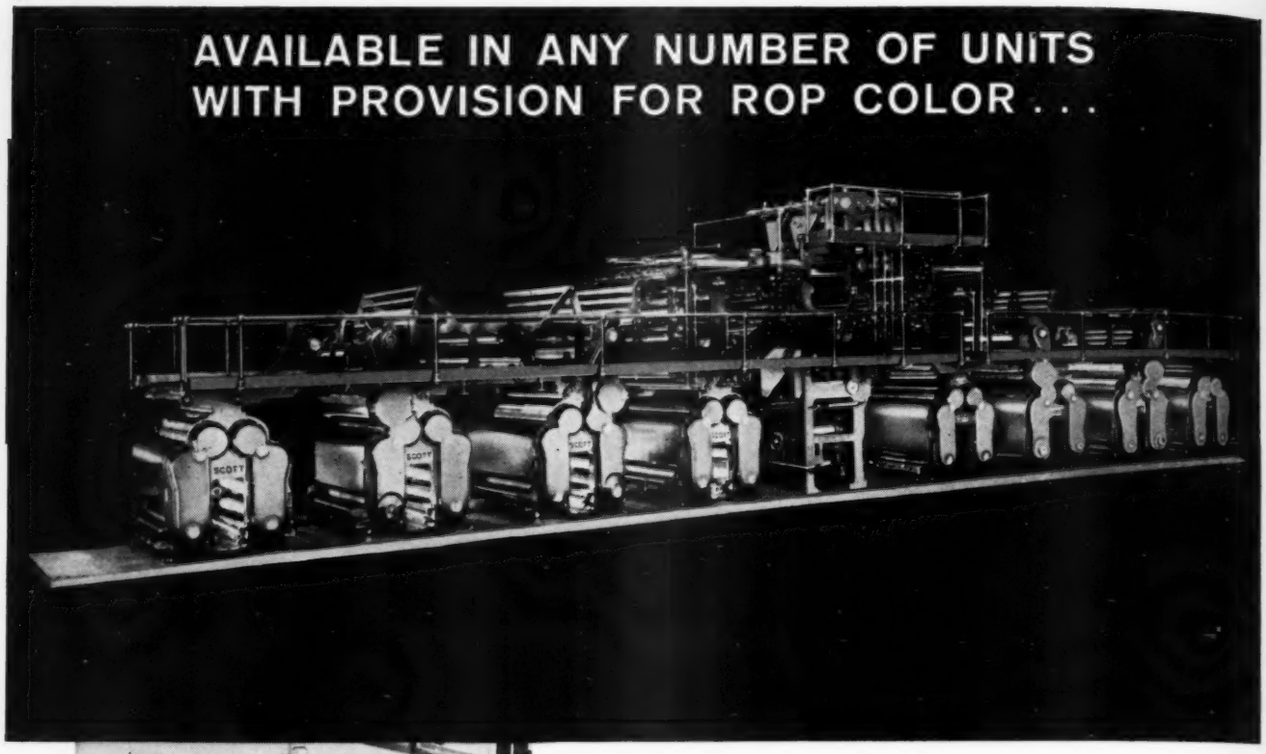
R. HOE & CO., INC.

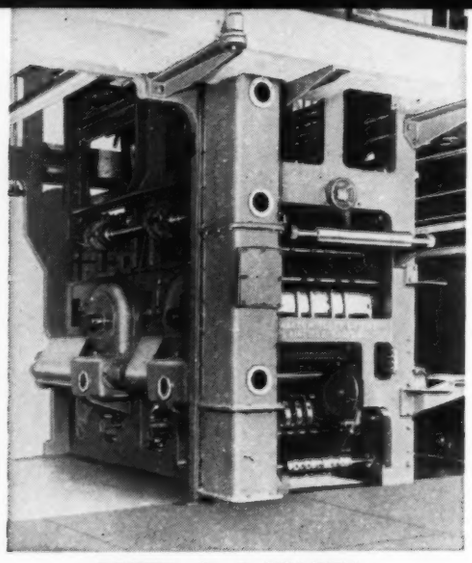
910 East 138th Street, New York 54, N. Y.

Sales Offices: New York • Boston • Chicago • Dallas • Miami • San Francisco

For More Information Circle 87 on Reader Service Card

SCOTT PRESS UNITS are ECONOMICAL TO INSTALL and MAINTAIN





SCOTT, 3–2 FOLDER,
featuring either folded edge
or cut edge forward.

Where economy is a watchword, Scott Presses can help any publisher solve a cost production problem where Pressroom modernization becomes a "must."

Scott Presses are available in any number and arrangement of units . . . with or without provision for ROP color. Whether you print editions of 8 or 128 pages, there is a Scott Press to serve your needs. Let our engineers show you how this versatile Pressroom equipment can help you print better-looking newspapers, *economically!*

Literature available—Send for it, today.

WALTER SCOTT & CO.

DIVISION OF **WOOD NEWSPAPER MACHINERY CORPORATION** Plant: Plainfield, N. J.
EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK

SCOTT presses

BUILDERS OF PRESSROOM AND REELROOM MACHINERY AND EQUIPMENT SINCE 1875

For More Information Circle 156 on Reader Service Card

JULY 1958
VOL. 88, NO. 10

PRINTING PRODUCTION

formerly PRINTING EQUIPMENT *Engineer*

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

REGULAR DEPARTMENTS

Letters to the Editors, 6
Helpful Literature, 18
Research, 51
Books, 77
Patents for Printing Industry, 79
News Items, 84
Printing Industry Meetings, 89
Equipment Sales and Installations, 91
Advertisers' Index, 96

EQUIPMENT & SUPPLIES

Nylon Letterpress Plates, 8
Electronic Enlarger, 8
Cady Dial Micrometer, 8
Border Attachment for Elrod, 12
Adjustable Speed Packaged Drives, 12
Roll Leaf Stamping Press, 12
Paper Salvaging Device, 16
Line-up Table Addition, 16
Redesigned Thomas Collator, 16
Morrison Saw Trimmer, 16
Powderless Etching Machines, 34
New G-E Light Source, 47
Offset Spray Exhaust, 51
Odor-Free Adhesive, 74
Offset Plate and Film File, 74
Portable Dehumidifier, 74
Polyethylene Storage Tank, 74
Waste Container, 74
Craftsmen Paper Cutters, 74
Lucikon Layout Table, 74
Teletypesetter Spaceband, 74
Offset Plate Graining Machine, 75
Webmaster Unit Press Drives, 75
Angle Gauge for Saws, 75
Harris Offset Job Press, 75
Dry Offset Perfecting Press, 76
Dot Etch Table, 76
Rotating Water Union, 76
Fluorescent Inks, 76
Static Measuring Device, 76
New Klimsch Camera, 76
Chrome Plating Machine, 76
Humidity Indicating Device, 76
Venus Regular Typeface, 77
Bending Steel Rule Dies, 77
New Metal Compound, 77
Aluminoid Proof Press, 77

PRINCIPAL ARTICLES

23 *Rogers' Impressions of DRUPA 1958*
By MARVIN C. ROGERS

26 *R&EC Examines New Production Processes*
By EDWARD H. OWEN

30 *Nickel-Plating of Stereotype Plates*
By EDWARD I. PETERS

33 *Economics of Labor Saving Machinery—Part II*
By J. W. ROCKEFELLER, Jr.

36 *Simplified Quality Control*
By WARREN L. RHODES

42 *Operations Involved in Lithographic Stripping*
By ADAM HENRI REISER

44 *Color Separation by Electronics*
By RICHARD L. SMITH

48 *Survey of Composing Room Tolerances*

52 *ANPA Confronts Newspaper Production Problems*
By EDWARD H. OWEN and ARTHUR ZIMMERMAN

MacD. Sinclair, Editor **Don Will, Publisher**

Edward H. Owen, Associate Editor
Adam Henri Reiser, Eastern Editor
Miss Annette Belanger, Asst. to Editor
Mrs. Anne Forsman Rackel, Advertising Production

Paul B. Holder, Advertising and Promotion, 1276 West Third St., Cleveland 13, O. Phone: PRospect 1-0088.
William L. Osborn, Eastern Advertising Representative, 2709 Grand Central Terminal, New York 17, N. Y. Phone: MUrray Hill 6-5980.
Melburn O. Simmons, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone: DEarborn 2-6467.
William A. Ayres, 233 Sansome St., San Francisco 4, Calif. Phone: YUkon 6-2981.
Jack DeBar Smith, William A. Ayers Co., 5880 Hollywood Blvd., Hollywood 28, Calif. Phone: HOllywood 2-1133.

PRINTING PRODUCTION is published monthly at 1276 West Third St., Cleveland 13, Ohio. © 1958 by Willsea Publishing Company.

Subscription rates in United States: One year, $4.50; two years, $8.00; three years, $10.00. Canada and U. S. Possessions: One year, $5.50; two years, $8.50; three years, $11.00. All other countries: One year, $10.00; two years, $16.00; three years, $20.00, in advance. Single current issues, 50c; back issues, 75c. December Equipment and Supplies Catalog Issue, $2.50 in United States; $3.50 outside United States. Canadian printing plant mechanical and production executives receiving PRINTING PRODUCTION under BPA regulations will be charged $1 per year in advance to cover additional postage to Canada. All foreign subscriptions payable in U. S. funds.

Member Publications BPA Business Audit

Accepted as Controlled Circulation Publication at Cleveland, Ohio.

OUR COVER: To further emphasize Graphic Arts research, we devote this month's front cover illustration to three of Lithographic Technical Foundation's top scientists who are daily exploring the problems of the lithographic industry. The research executives are pictured at work in LTF's Chicago laboratory which was purchased recently by the Foundation. LTF's contributions to the betterment of lithographic printing has been a 34 year combined effort of thousands of individuals and plants. Among the staff members closest to the scene are the front cover subjects, left to right: Edward J. Martin, division supervisor; Michael H. Bruno, research manager; and Robert Reed, senior consultant.

LETTERS
TO THE EDITORS

Disputes Florida Report

During the past six years you have given reports on Photon, Linofilm and Justowriter machines. All of these are *tape* operated.

In your March 1958 issue (page 98) you refer to the January 19 issue of the Panama City (Fla.) *News-Herald* as being the first newspaper in the world to combine tape and the photocomposition process commercially.

It would seem that Teletypesetter tape on a Fotosetter was outdated before it began.

William A. Chrisley
Beckley Newspapers Corp.
Beckley, W. Va.

EDITOR'S NOTE: *Reader Chrisley is correct to a point. The Photon and Linofilm (and others not mentioned—ATF Typesetter and Monophoto) are tape operated machines for producing type on film or photographic paper. The Justowriter, also tape operated, produces justified composition which must be photographed in a separate operation. The tape, however, is normally prepared (or punched) in the same plant as that in which the photographic unit operates.*

The report from the Panama City (Fla.) News-Herald concerned the combination of a Fotosetter controlled automatically by Teletypesetter tape. The distinctive feature of the method (and the first such application to come to our attention) dealt with feeding wire service (prepared at a distant source and transmitted by wire) or locally punched TTS tape through the Fotosetter machine.

More Remarks About Our Name Change

I think your new name is a big improvement, but it is going to take some getting used to because *Printing Equipment Engineer* was almost a household term. Lots of good luck.

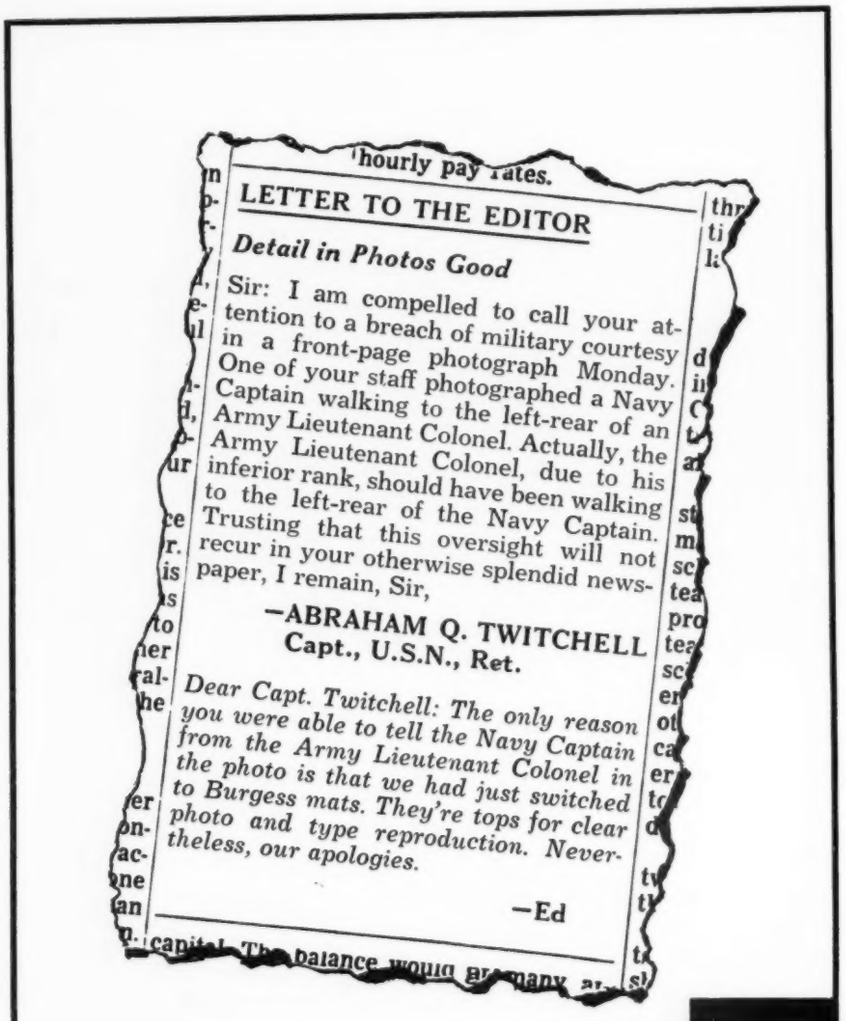
Ray Abel, Sales Manager
Universal Mono-Tabular Corp.

. . . as for your change of name to PRINTING PRODUCTION, I am all for it! Far more euphonious, and accurate, too.

Walter Kubilius
Technical Publications Director
American Type Founders Co., Inc.

It isn't too often that trade or other publications change their names and I suppose for the usual reasons. Therefore, congratulations as well as good wishes are due PRINTING PRODUCTION.

J. J. McCall
Heidelberg Eastern, Inc.


hourly pay rates.
LETTER TO THE EDITOR
Detail in Photos Good
Sir: I am compelled to call your attention to a breach of military courtesy in a front-page photograph Monday. One of your staff photographed a Navy Captain walking to the left-rear of an Army Lieutenant Colonel. Actually, the Army Lieutenant Colonel, due to his inferior rank, should have been walking to the left-rear of the Navy Captain. Trusting that this oversight will not recur in your otherwise splendid newspaper, I remain, Sir,
—ABRAHAM Q. TWITCHELL
Capt., U.S.N., Ret.
Dear Capt. Twitchell: The only reason you were able to tell the Navy Captain from the Army Lieutenant Colonel in the photo is that we had just switched to Burgess mats. They're tops for clear photo and type reproduction. Nevertheless, our apologies.
—Ed

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of
Burgess Chrome and Supreme Tone-Tex Mats, Freeport, Illinois

BURGESS Chrome MATS

Canadian Representative, R. M. Lousen & Co., Ltd.,
Kennedy Road, Agincourt, Ontario

For More Information Circle 26 on Reader Service Card

Newspaper ROP Color Linage Shows Increase in April

Newspaper ROP color linage for April, 1958 was up over a million lines to 11,032,451, or 11.5% as compared with the same period last year, according to the first issue of the *Hoe Report on ROP Color*. Other display advertising in newspapers is reported to be down 7.6%, compared with April, 1957.

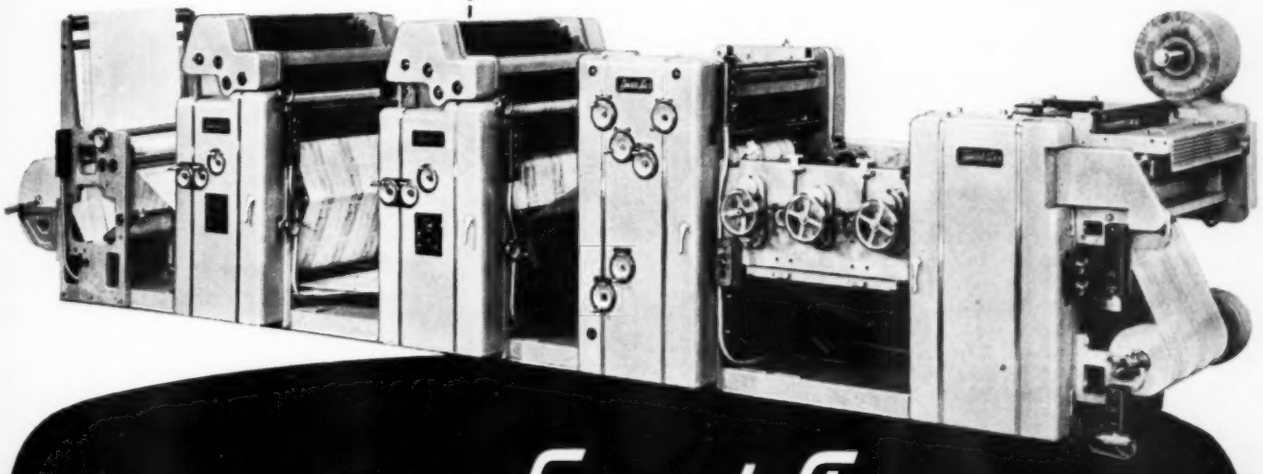
The report is being published monthly as a service to the newspaper and advertising industries by R. Hoe & Co. It is compiled by Media Records, under an exclusive agreement with Hoe, and is the only continuing monthly report available on the subject. Data is based on measurements of 411 newspapers in 132 cities.

Plate Conference Proceedings

Proceedings of the joint Laminated Plates Conference, October, 1957, Miami Beach, Fla., have been reported in a 36 page booklet. The conference was sponsored by the Intl. Assoc. of Electrotypers & Stereotypers and the Research & Engineering Council. Copies of the booklet are available at 25 cents per copy from Intl. Assoc. of Electrotypers & Stereotypers, 758 Leader Bldg., Cleveland 14, Ohio.

only Speed-Flex has LINEARSCOPE

The electronic device that measures and sets the throw lengths on line hole punches while your press is operating at top speed. Manufactured by Western Gear, makers of all Speed-Flex presses marketed by Orville Dutro & Sons, Inc.



the new UNIT-TYPE Speed-Flex OFFSET and RUBBER PLATE PRESSES

offer these new material and labor saving features:

- Linearscope—automatic throw length control
- Unexcelled ink distribution
- Easy accessibility
- Electrically controlled water feed
- Automatic successive numbering throwoff and reset
- Electronic clutch selector
- Plus all the other Speed-Flex advanced features

Standard sizes: 13″ web width by 16″ and 17″ cylinder circumferences
26″ web width by 17″, 21″ and 22″ cylinder circumferences

Deliveries: Usually 30 to 90 days. Special sizes on delayed deliveries

For further information write, wire or phone collect

Western Gear CORP.

Orville Dutro & Son, Inc.
PRINTING PRESS SALES AND SERVICE
117 W. 9th St., Los Angeles 15, California
TRinity 8556

NEW YORK, N. Y. 1140 BROADWAY MURRAY HILL 3-1253
CHICAGO, ILL. 81 W. VAN BUREN ST. RANDOLPH 6-7977

For More Information Circle 54 on Reader Service Card

EQUIPMENT & SUPPLIES

If you wish additional information concerning equipment, supplies, and/or technical literature, please make your request on *PRINTING PRODUCTION's* Reader Service Card found in this issue.

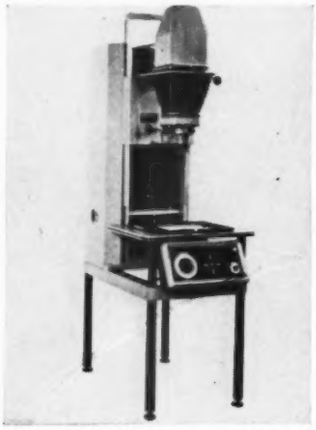
Nylon Letterpress Plates

A nylon letterpress printing plate for use by commercial printers, carton, film, package and publication printers has been developed by CSW Plastic Types, Inc., and is being sold through ADS, Incorporated. The plates, available for both flatbed and rotary printing, are said to enable a high degree of printing ink uniformity with excellent lay and coverage of ink. Plates are flexible, semiflexible or rigid and can be furnished plain backed, sticky backed, and brass, steel, lead, aluminum or wood backed. Any thickness plate can be supplied in sizes up to 18 in. by 24 in. Circle No. 254 on Reader Service Card.

Electronic Enlarger

Recently announced by LogEtronics Incorporated is an improved model of its electronic enlarger for photographic projection printing. Identified as the Model D-5, the unit features automatic dodging and automatic exposure control for black and white enlargements from 35 mm. to 4 in. by 5 in. negatives.

Automatic dodging is said to be accomplished through an electronic feed back circuit which continuously varies intensity of light beams to compensate for varying negative densities. The scanning beam emanates from a cathode ray tube



which brightens to burn in highlights and dims to preserve shadow detail, in accordance with modulations emitted by a phototube. Exposure control is accomplished through a light-integrating phototube, mounted below easel, resulting in matched prints from a wide range of negatives. End results are claimed to be excellent in detail and brilliance.

Unit is 79 in. high, 24 in. wide, and 38 in. deep. The 22 in. legs are removable. Circle No. 275 on Reader Service Card.

Di-Noc Line Film

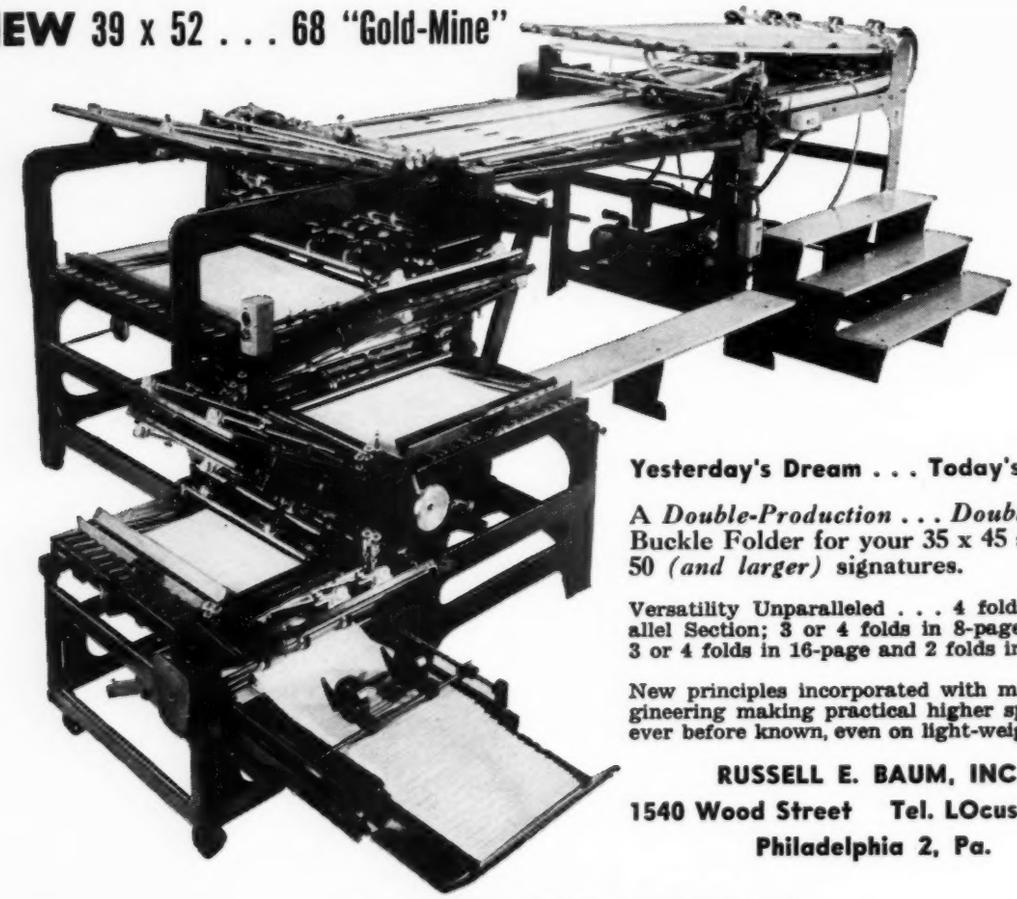
An orthochromatic line film, called Dinoline Ortho, has been developed by Di-Noc Chemical Arts, Inc. The emulsion is said to have a wide exposure latitude suitable for negative or positive line work in the camera or contact printing frame. A 0.005 in. Polystyrene base is said to provide dimensional stability. According to manufacturer, standard thickness of film makes it interchangeable with ordinary lith film, permitting use of both types on a single flat. Film is available in standard sheet sizes up to 24 in. by 32 in. and in rolls up to 40 in. by 100 ft. Circle No. 281 on Reader Service Card.

Cady Dial Micrometer

The Cady 10000 Micrometer, product of E. J. Cady & Co., is an instrument which will caliper a minimum of 0.0001 in. and a maximum of 0.050 in. It is stated that papers, foils and tissues can be calipered as well as a variety of other thin materials. Instrument consists of a cast base with 4 in. throat, finished in gray enamel. The direct reading dial is anodized aluminum with black graduations, and is shielded by beveled plate glass. Circle No. 265 on Reader Service Card.

(*Continued on Page* 12)

NEW 39 x 52 . . . 68 "Gold-Mine"



Yesterday's Dream . . . Today's Reality

A *Double-Production . . . Double-Profit* Buckle Folder for your 35 x 45 and 38 x 50 *(and larger)* signatures.

Versatility Unparalleled . . . 4 folds in Parallel Section; 3 or 4 folds in 8-page Section; 3 or 4 folds in 16-page and 2 folds in 32-page.

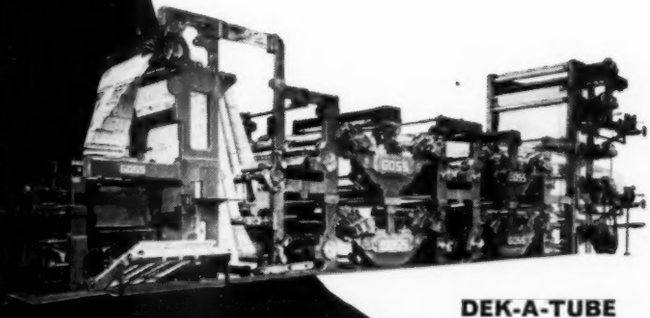
New principles incorporated with modern engineering making practical higher speed than ever before known, even on light-weight stock.

RUSSELL E. BAUM, INC.
1540 Wood Street Tel. LOcust 8-4470
Philadelphia 2, Pa.

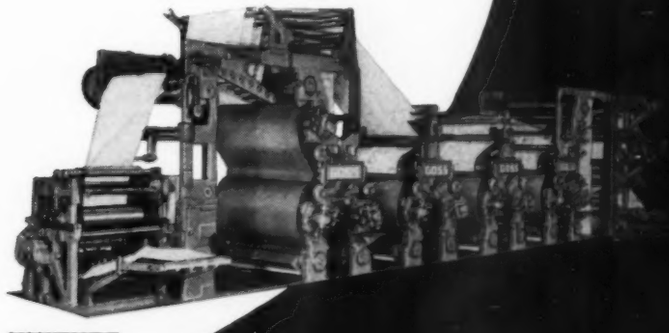
For More Information Circle 18 on Reader Service Card

UNIVERSAL

GOSS



DEK-A-TUBE



UNITUBE

GOSS BUILDS TO FIT YOUR REQUIREMENTS . . .

3
INTERMEDIATE MODELS

- ★ Universal
- ★ Unitube
- ★ Dek-A-Tube

For progressive dailies of intermediate circulation, Goss has the equipment that answers the need. Let us help you select the press that best fits your requirements. Whether it's the Goss Universal, a 2-page wide, semi-cylindrical plate press with many Headliner features, or either of the tubular plate presses, the Unitube or Dek-A-Tube...you're sure of a sound investment.

All incorporate such important Goss features as: continuous ink feed for uniform coverage at all speeds...floor level controls and adjustments for complete accessibility ...and full ROP Gosscolor flexibility for increasing ad revenue and circulation.

Remember, Goss builds to fit *your* requirements. Check with us for the right press in the intermediate range... the Universal, Unitube or Dek-A-Tube.

The GOSS Company ★ 5601 WEST 31ST STREET, CHICAGO 50, ILLINOIS
A Division of Miehle-Goss-Dexter, Inc.

For More Information Circle 72 on Reader Service Card

SIMILAR, BUT DIFFERENT

Everything about PRINTING PRODUCTION Magazine sets it apart from other printing magazines—It's different. Different kind of circulation . . . Different service to the industry . . . Different value to advertisers.

DIFFERENT circulation because it's restricted to men in charge of Graphic Arts *production*, the men we refer to as Production Executives.

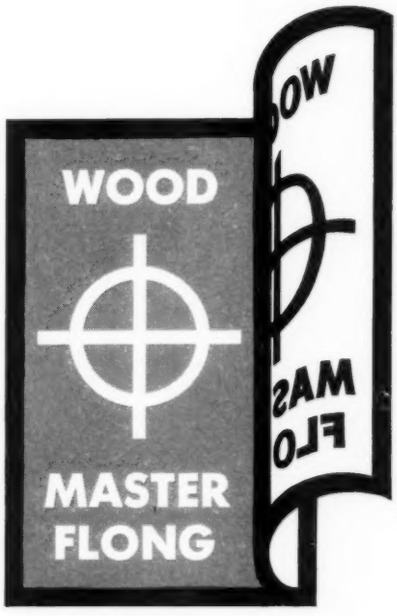
DIFFERENT service to the industry because editorial content is restricted to Graphic Arts *production* information—Making it the *only* magazine specializing in new and improved *production* techniques, the key to increased productivity and profits.

DIFFERENT value to advertisers because it provides the most selective audience of any printing magazine—the *men in charge of production*. The importance of the Production Executive to sales is significant. Just ask a salesman.

Don't minimize the importance of the Production Executive. Advertise right to him in PRINTING PRODUCTION.

ABOUT NO-PACK MATS...

DID YOU KNOW THAT THE WOOD MASTER FLONG IS A SUCCESSFUL, DEPENDABLE, NO-PACK STEREOTYPE MAT?



NOW USED BY 23 LEADING DAILY NEWSPAPERS

- NO-PACK WOOD MASTER FLONGS ARE NOT EXPERIMENTAL MATS
- 23 LEADING NEWSPAPERS DEPEND ON MASTER FLONGS 100% IN DAILY PRODUCTION
- OVER ⅓ MILLION MASTER FLONGS PER YEAR NOW IN USE

NO MAJOR CHANGE IN EQUIPMENT

With no major change in your present equipment, Wood Master Flongs provide:

DIRECT SAVINGS
INCREASED PRODUCTION
BETTER PRINTING
DEADLINE FLEXIBILITY
REDUCED COSTS

WOOD FLONG CORPORATION
HOOSICK FALLS, NEW YORK

NEW YORK OFFICE: 551 FIFTH AVENUE
TELEPHONE: MUrray Hill 7-2950

SERVING THE GRAPHIC ARTS INDUSTRY EXCLUSIVELY

For More Information Circle 189 on Reader Service Card

Equipment and Supplies

(Continued from Page 8)

Border Attachment for Elrod

An attachment for creating additional rule and border designs with standard molds on Elrod machines is being manufactured by V. C. Shidler Products. Called Roll-A-Face, the attachment is described as literally rolling a design into the face of freshly cast material. Manufacturer reports attachment can be attached or removed while machine is in operation. Six standard rollers are included with attachment. Circle No. 283 on Reader Service Card.

Adjustable Speed Packaged Drives

A new line of adjustable speed d.c. packaged drives featuring static power conversion has been developed by Cutler-Hammer, Incorporated. Known as Ultraflex packaged drives, they are said to utilize light, compact static power components.

Conversion units eliminate all bearings, brushes, commutators, shafts and couplings of rotary type d.c. power sources. Compact size of drives makes possible savings of up to 50% in floor area and reduction in weight permits wall mounting of many sizes, reports Cutler-Hammer.

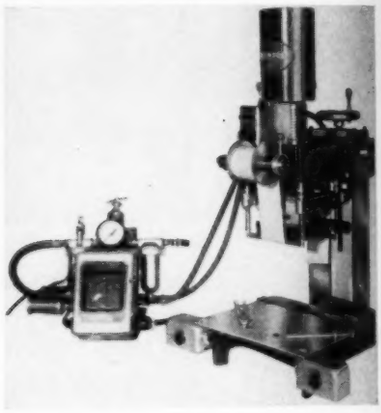
Drives are available in two forms: Ultraflex E, a 1 h.p. to 40 h.p. electronic adjustable speed drive, and the Ultra-

flex M, a 1 h.p. to 200 h.p. magnetic amplifier adjustable speed drive. All drives include three basic components: Ultraflex enclosed panel which houses conversion and control units; an operator's station, and an industrial d.c. motor.

Control also includes protective devices for fused short circuit protection, eutectic overload protection, under voltage protection, current limiting relays, and on the Ultraflex E, a motor operated timer. Operator's station incorporates start stop pushbuttons and a speed regulator. Circle No. 279 on Reader Service Card.

Roll Leaf Stamping Press

Olsenmark Corp. has announced the introduction of an air-operated roll leaf stamping press known as the Kensol 15T. Manufacturer lists the following features: Adjustable electric dwell-timer, thermostatic heat control, complete air

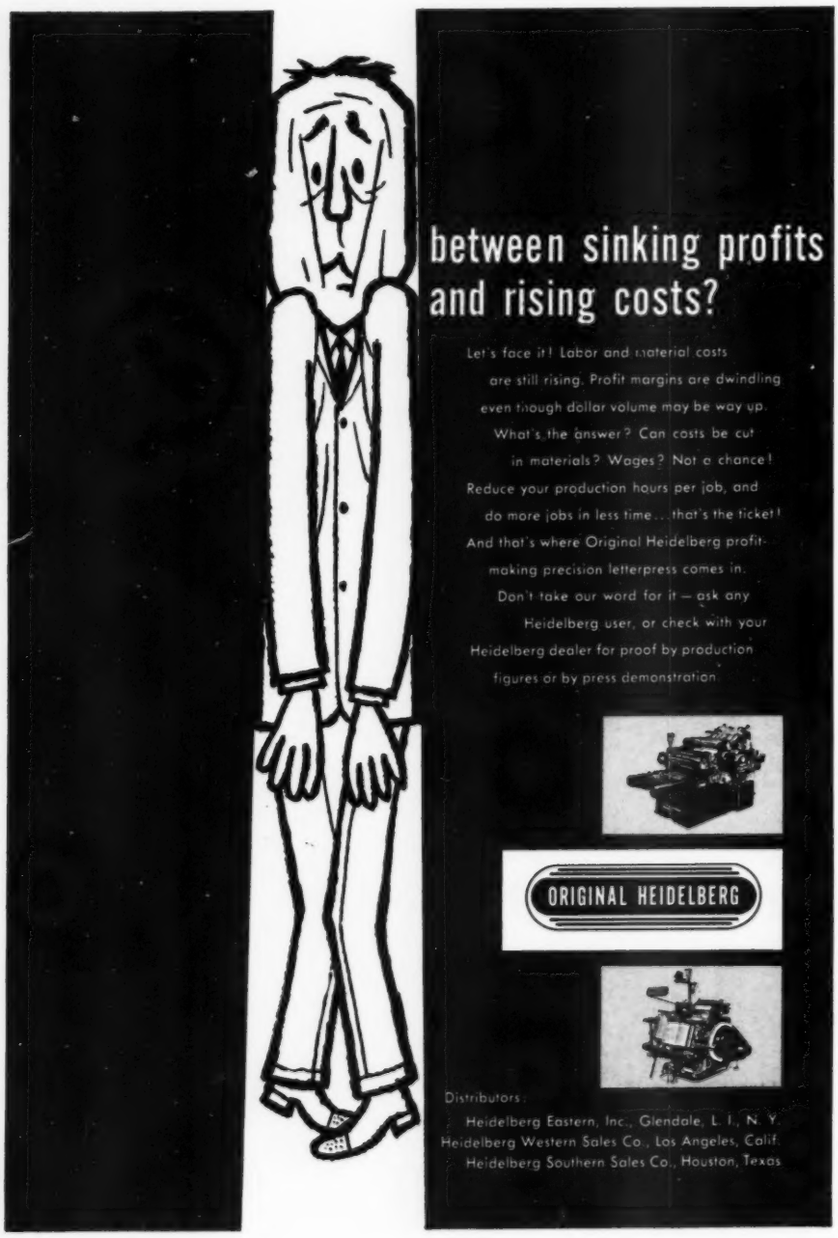


controlling unit, four-way main valve, mufflers, and two-hand safety switches. Unit weighs 146 lbs., has 2 in. by 4 in. impression area, and stamps items up to 6 in. thick. It is equipped with 4 in. diam. air cylinder and has 2 in. head stroke. Circle No. 263 on Reader Service Card.

Non-Glare Incandescent Lamp

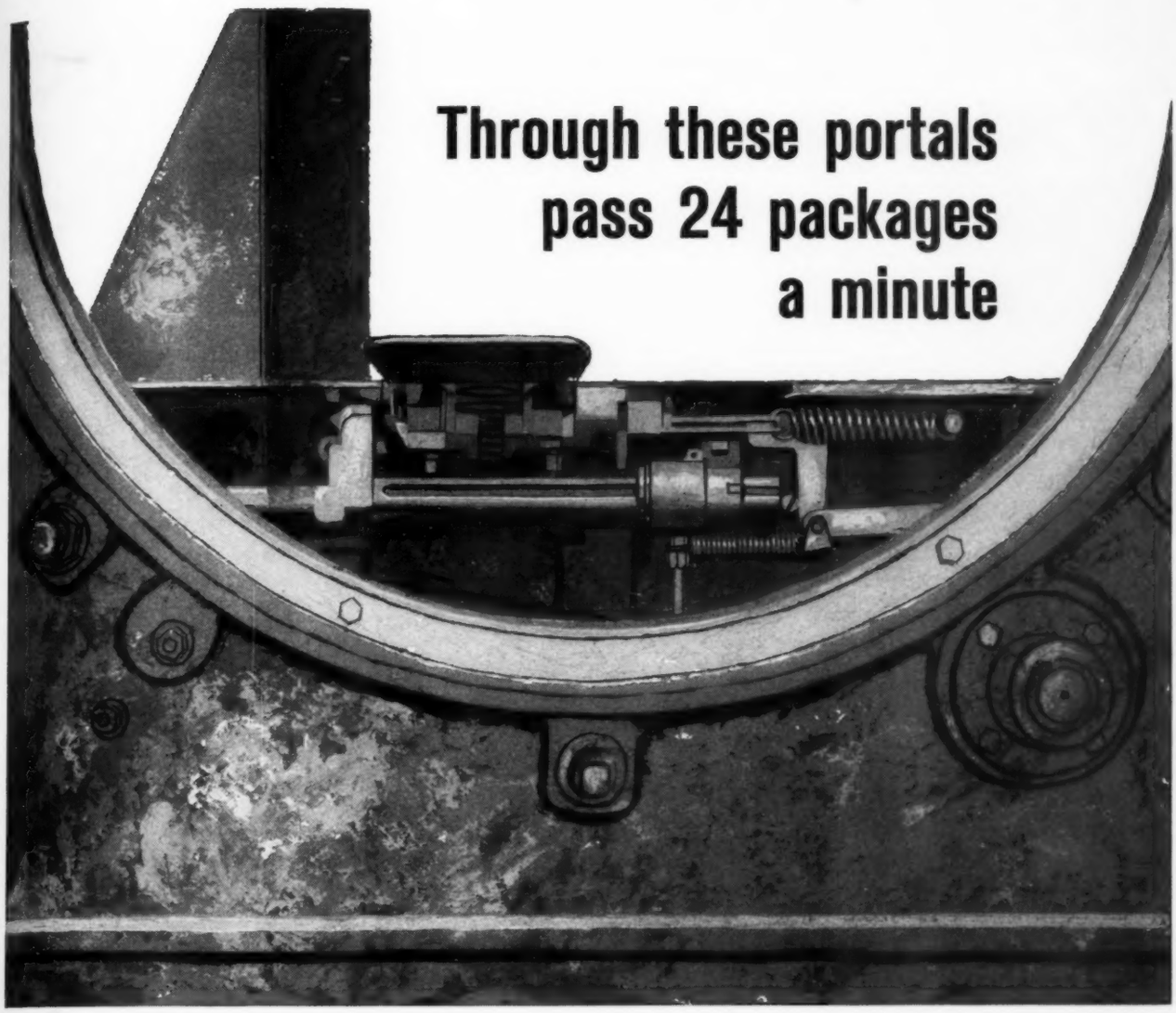
Nu-Lite Corporation recently introduced a non-glare incandescent lamp, known as Nilex, for use in plants where glare is a problem. Lamp is claimed to give up to 11,040 hrs. of service when operated on a 120 v. line; 5520 hrs. on a 125 v. line; and 3450 hrs. on a 130 v. line. Lamps are available in 70 w. and 110 w. in the 120 v. to 130 v. range. Circle No. 261 on Reader Service Card.

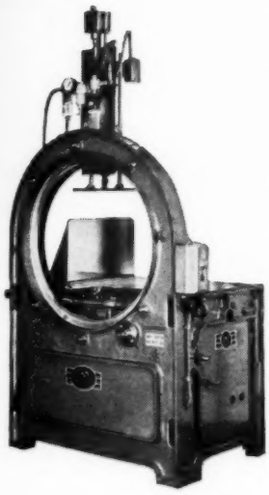
(Continued on Page 16)


between sinking profits and rising costs?
Let's face it! Labor and material costs are still rising. Profit margins are dwindling even though dollar volume may be way up. What's the answer? Can costs be cut in materials? Wages? Not a chance! Reduce your production hours per job, and do more jobs in less time... that's the ticket! And that's where Original Heidelberg profit-making precision letterpress comes in. Don't take our word for it — ask any Heidelberg user, or check with your Heidelberg dealer for proof by production figures or by press demonstration.
ORIGINAL HEIDELBERG
Distributors:
Heidelberg Eastern, Inc., Glendale, L. I., N. Y.
Heidelberg Western Sales Co., Los Angeles, Calif.
Heidelberg Southern Sales Co., Houston, Texas

For More Information Circle 243 on Reader Service Card

Through these portals pass 24 packages a minute





This is the "business end" of the USS Gerrard Model 12—the low-cost automatic strapping machine that makes up to 24 cycles a minute. The Model 12 comes in two sizes that handle packages as small as 8″ wide by 2″ high; the larger Model 1250 handles packages up to 26″ wide by 20″ high. Both machines are equipped with a compression device that compresses the packages and holds them in position during the tying operation.

The Model 12 is 31″ high, weighs only 1350 pounds, and requires only 7½ square feet of valuable floor space. Using extra-strong USS Gerrard High-Tensile Round Steel Strapping, 14 through 18½ gauge, you can thread the machine in less than a minute. It's simple to operate, and its compact, rugged construction with a one-shot built-in lubrication system means low maintenance. Tension can be predetermined, and when set is uniformly maintained on all packages regardless of size or weight. Packages which vary in size and shape can be strapped without adjustment to the machine.

For more information, contact your USS Gerrard sales representative. Also be sure to mail the coupon for the folder on the Model 12. *USS and Gerrard are trademarks*

USS

Gerrard Steel Strapping Dept.
U. S. Steel Supply
Division of
United States Steel

Gerrard Steel Strapping
United States Steel Corporation
4723 S. Richmond St., Chicago 32, Ill.

Without obligation, please send me the new Model 12 Brochure.

Name .....

Company .....

Address .....

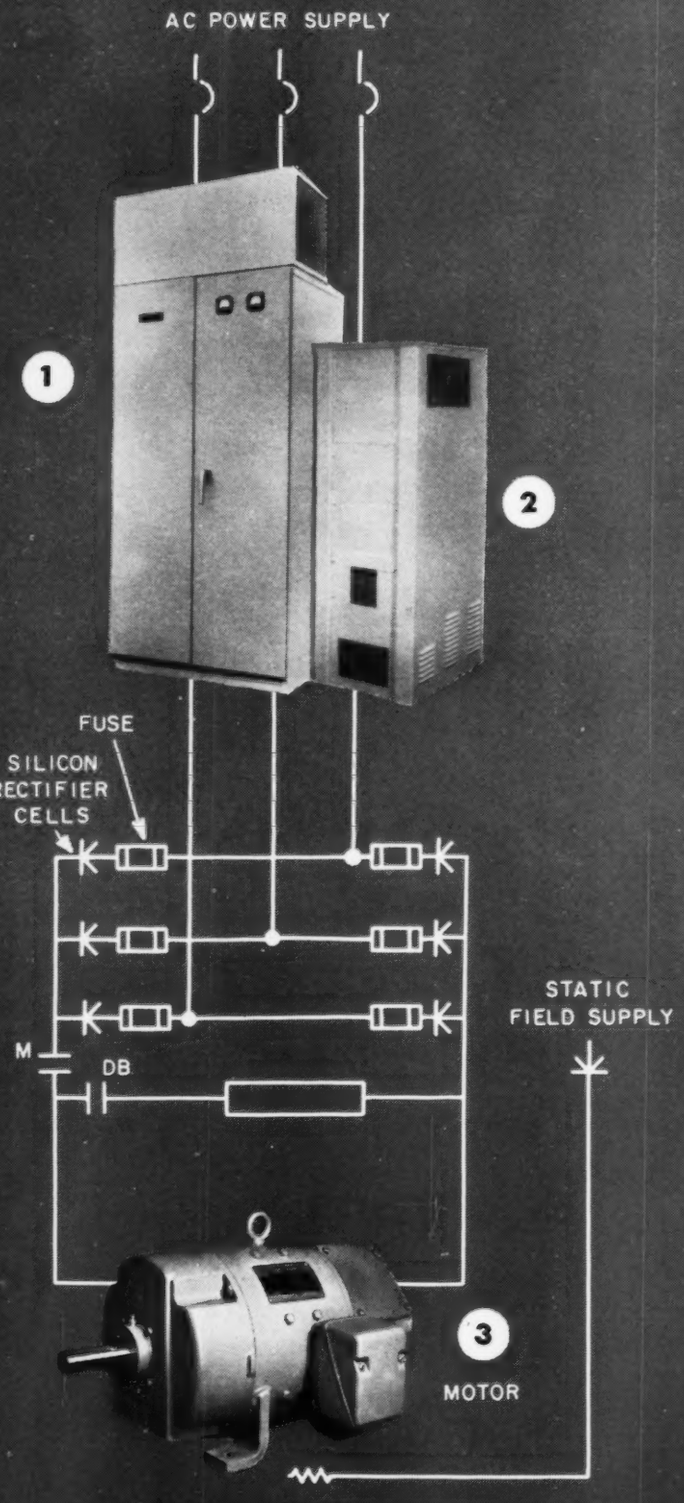
City ..... State .....

Have Salesman call ☐

For More Information Circle 70 on Reader Service Card

OPERATION upturn
Buy now for extra values
GENERAL ELECTRIC

GENERAL ELECTRIC
MAINTAINS PRESS DRIVE
LEADERSHIP WITH . . .



A new DC drive system for your press applications

General Electric DC Inductrol* system answers a long standing industry need for a simple, inherently more flexible drive.

New General Electric Inductrol DC press drive is one of the simplest, most flexible and economical newspaper drive systems available today. This new press drive system utilizes semiconductor silicon rectifiers, an Inductrol induction voltage regulator, and a d-c Kinamatic† motor to provide wide speed ranges and precise control.

The simplicity of this new GE press drive system offers increased savings two ways: (1) it cuts maintenance costs and (2) it increases productivity because smoother, stepless d-c control reduces web breaks—permits more continuous press operation.

NEW DRIVE SYSTEM OFFERS MANY ADVANCED FEATURES—General Electric Inductrol DC Printing Press Drive is less complex than other press drive systems. A simple induction voltage regulator has a minimum of moving parts—provides complete voltage adjustment for full speed control—makes possible an infinite number of speeds ranging from threading to maximum. All control equipment is compactly housed, presents a clean appearance, and can be installed in any convenient location.

Power factor and efficiency remain high over the production range. No external DC supply is required.

FOR COMPLETE INFORMATION on the new General Electric Inductrol DC Press Drive system, contact your nearest G-E sales engineer. For a more detailed description of this equipment, write for free bulletin GEA-6763, INDUCTROL DC PRINTING PRESS DRIVE, General Electric Company, Section 653-45, Schenectady 5, New York.

** Registered Trade-mark of General Electric Co.*
† Trade-mark of General Electric Co.

Engineered Electrical Systems for the Printing Industry

GENERAL ELECTRIC

◀ Electrical schematic diagram of new General Electric Inductrol DC Printing Press Drive. 1. Rectifiers and controls. 2. Inductrol voltage regulator. 3. Kinamatic d-c motor.

For More Information Circle 68 on Reader Service Card

NOW...

MASTER EXTENDS ITS LINE OF POWDERLESS ETCHERS WITH THE ALL NEW...

MODEL M-32

MAXIMUM PLATE SIZE 20" x 24"

A FEW OF THE OUTSTANDING FEATURES ARE . . .

★ **TWO COMPLETE PADDLE ASSEMBLIES** for uniform quality

★ **AUTOMATIC CONTROLS**

★ **SMALLER BATH VOLUME** 20 gallons

This machine is intended where production is not large enough to warrant one of our larger bath volume machines, or where it would be advantageous to operate a number of small bath volume machines.

For complete information write Master Sales & Service Corp., Wyncote, Pa.

PRICE $4500
INCLUDING CRATING

ALSO DOW-MASTER POWDERLESS ETCHERS

DM-24 MAXIMUM PLATE SIZE 15" x 18"

DM-35 MAXIMUM PLATE SIZE 22" x 28"

DM-48 MAXIMUM PLATE SIZE 24" x 40"

MASTER SALES & SERVICE CORP. WYNCOTE, PA.

For More Information Circle 113 on Reader Service Card

Equipment and Supplies

(Continued from Page 12)

Paper Salvaging Device

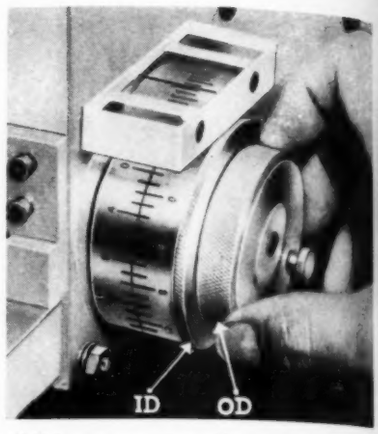
A device for salvaging paper left on cores of newsprint rolls has been designed by Andrew J. Conover of Orlando Daily Newspapers, Inc., Orlando, Fla. Device is said to strip material from cores in designated widths. Floor space required is either 3 ft. by 3 ft. or 6 ft. by 5 ft., depending upon design used. Plans, materials list, and instructions for constructing the device are available from designer. Circle No. 284 on Reader Service Card.

Line-up Table Addition

The Jos. Gelb Co. has announced the addition of Add-A-Matic counters as standard equipment on all Gelb line-up tables. A counter is intercoupled to the vernier shaft of each of the two straight edges.

Each counter, according to Gelb, is equipped with two interchangeable vernier dials as well as a hairline setting indicator. The dials are calibrated as low as 0.001 in. A tolerance of ± 0.001 in. is said to be maintained through constant contact of the gears.

Each rotation of the dial OD (see picture) represents 1 in. of straight edge travel. Gelb states that the dial is friction locked and zero resettable. The outer



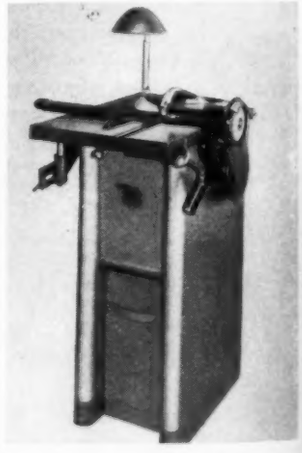
dial is reset to zero after each dimension is measured. Inner dial ID (see picture) registers each additional dimension, and is said to always show the total distance traveled. Circle No. 266 on Reader Service Card.

Redesigned Thomas Collator

Thomas Collators, Inc. has announced its redesigned collator said to enable easy adjustment of the machine for collating sheets of paper from 5 in. to 17 in. The maximum stroke length of the feed arms, which eject the paper, has been doubled, providing a total adjustment range of 12 in., reports Thomas. Adjustment of stroke length is accomplished by a finger tip dial, calibrated in inches to correspond with the length of paper to be collated. It is claimed one rotation of dial effects the full adjustment. Circle No. 256 on Reader Service Card.

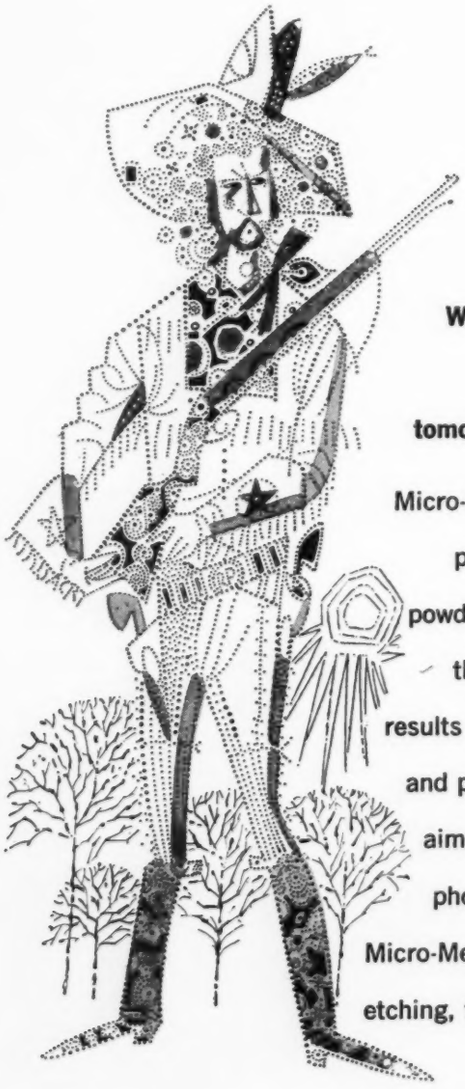
Morrison Saw Trimmer

A pistol grip adjustment said to adjust blade to any desired cutting height with a trigger squeeze is featured on the Morrison Model 45 saw trimmer recently introduced by Morrison Company. Adjustment is said to provide accuracy of 0.001 in. on various cutting heights.



Other features are: Behind-gauge workholder, 75 pica gauge, 135 pica extension gauge, miter gauge, right and left hand miter vise for face-up mitering, emery wheel, saw grinding attachment, trimmer grinder, and adjustable lighting. Table is 18 in. by 27 in. and motor is ⅓ h.p. Circle No. 272 on Reader Service Card.

(Continued on Page 74)



We've scouted ahead
to bring you
tomorrow's metal, today.

Micro-Metal, the zinc alloy perfected primarily for one-bite, powderless etching, and Micro-Mix, the new chemical additive, are results of a concentrated research and product development program aimed at help...g you produce finer photoengravings, faster.

Micro-Metal is perfect for conventional etching, too—ask your regular supplier.

Rolled Plate Metal Company • Atlantic Zinc Works, Inc.
196 Van Brunt Street, Brooklyn 31, New York
America's number one producer of quality photoengravers' plates
Micro-Metal • Zomo-Zinc • Zomag • A-Z Alloy • Owl Brand
Working in the interest of Modern Letterpress

For More Information Circle 16 on Reader Service Card

USE THE READER SERVICE CARD FOR MORE INFORMATION

We have processed more than 19,000 inquiries for readers since our Reader Service Department was introduced last year. Take advantage of this free service for additional information. Your inquiry will be sent to the firm for which it is intended within two days of our receiving it.

IT'S EFFICIENT, FAST AND EASY

This postage-paid card is for your convenience in requesting further information on any editorial item or advertisement in this issue of PRINTING PRODUCTION. Circle the number for any item or advertisement and fill in the card completely. Your request will be promptly sent to the firm for which it is intended.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340	341	342	343	344	345
346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370	371	372	373	374	375

PLEASE PRINT OR TYPE

(This card valid only if used before August 15, 1958 and only if the card is filled out completely.)

Name _____

Title or Department _____

Company Name _____

Company Address _____

City _____ Zone _____ State _____

JULY '58

FIRST CLASS
PERMIT NO. 2285
CLEVELAND, OHIO

BUSINESS REPLY CARD
No Postage Stamp Necessary If Mailed In the United States

POSTAGE WILL BE PAID BY

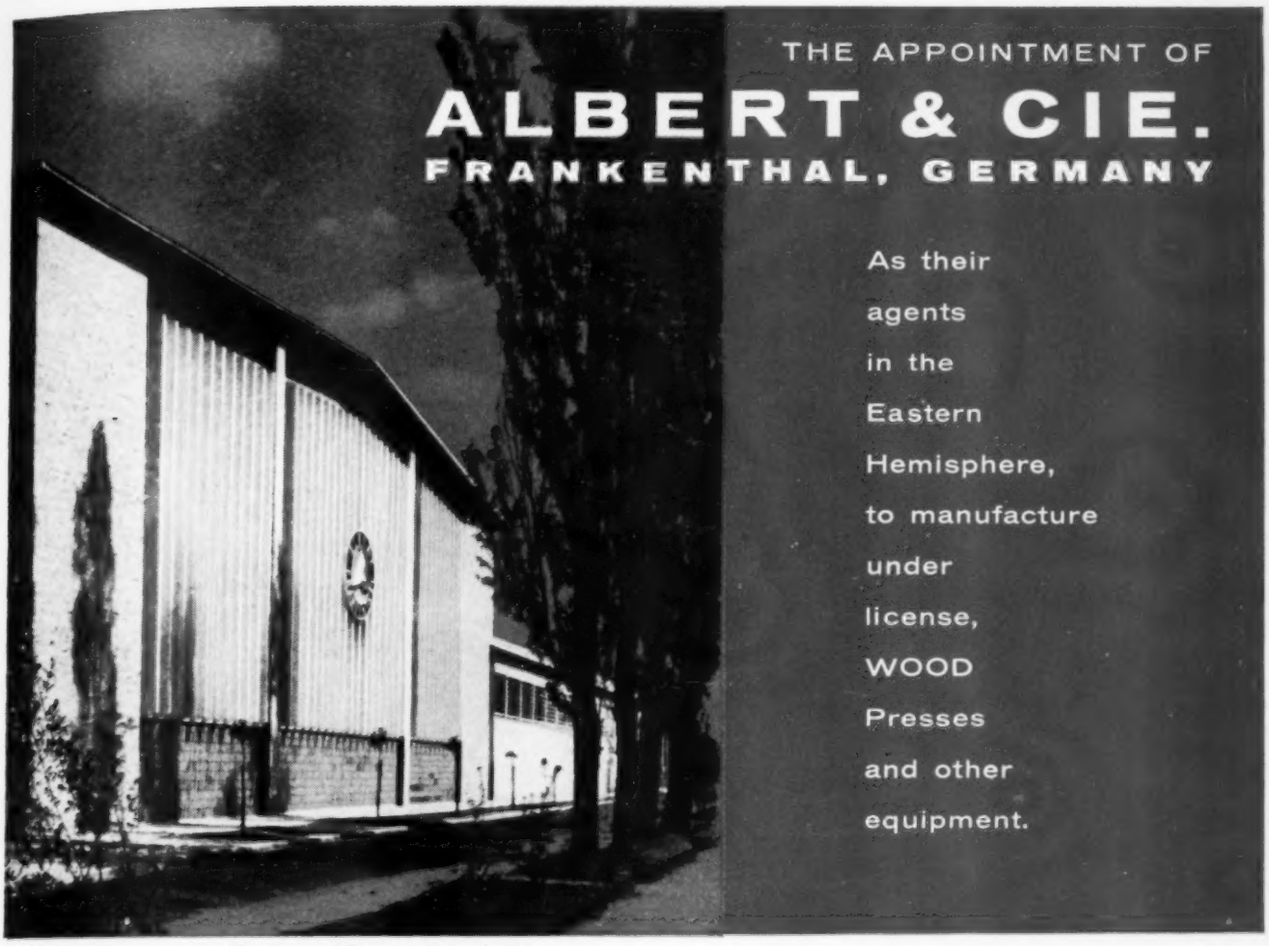
PRINTING PRODUCTION
1276 West 3rd Street
CLEVELAND 13, OHIO

READER SERVICE DEPARTMENT

FOR YOUR CONVENIENCE . .

This postage-paid card is for your convenience in requesting more facts on any item in this issue.

WOOD *is proud to announce*


THE APPOINTMENT OF
ALBERT & CIE.
FRANKENTHAL, GERMANY
As their agents in the Eastern Hemisphere, to manufacture under license, WOOD Presses and other equipment.

One of the new assembly wings at Frankenthal plant of Albert & Cie., Federal Republic of Germany.

ALBERT & CIE., established a century ago, are one of three large manufacturers of Printing Presses and equipment in Western Germany. Over 1,800 craftsmen are employed in their modern factories, warehouses and foundries which occupy some 400,000 sq. ft. of manufacturing space.

IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, N.J. • EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N.Y.

MANUFACTURERS OF PRESSES, COLOR UNITS, REELROOM AND STEREOTYPE EQUIPMENT FOR A CENTURY

For More Information Circle 190 on Reader Service Card

HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

FLEXOPRINT BOOKLET

A 20 page illustrated booklet relating facts about the Flexoprint published list system has been prepared by Remington Rand, Div., Sperry Rand Corp. Booklet KD-849 is descriptive of how systems, which utilizes typed cards and the offset process facilitates changes in directories, catalogs and price and parts lists. Circle No. 357 on Reader Service Card.

MONOTYPE BOOKLET

Lanston Monotype Co. is offering a booklet, *The Monotype Family*, to describe its keyboard, caster, material maker, and giant caster. Circle No. 344 on Reader Service Card.

HAMILTON DESIGN KIT

Hamilton Manufacturing Co. is making it possible for newspapers to design their own composing room tables through use of illustrated cutouts. Kit includes a choice of five table lengths, three working top styles, two types of overhead lights and 90 different material storage units. Hamilton will build any model designed from kit. Circle No. 329 on Reader Service Card.

SAW BLADE FOLDER

A two color, six page folder which contains descriptions of various saw blades is available from Automatic Saw Co. Included is information on standard blades for composing, stereo, engraving, and electrotype work. Special blades and carbide tipped blades are also discussed. Circle No. 309 on Reader Service Card.

HAMMOND GLIDER SAW

Trim-O-Saw Bulletin 958 descriptive of the Hammond G-100 Glider has been published by Hammond Machinery Builders, Inc. Features mentioned are an all purpose saw guard, chip and waste disposal, and a micrometer gauge. Circle No. 350 on Reader Service Card.

CHALLENGE PROOF DRIER

Challenge Machinery Co. has released a four page, two color folder to describe its radiant heat proof drier. Unit, which is said to dry proofs quickly without scorching, is available in 17 in. by 22 in. and 20 in. by 26 in. models. Circle No. 321 on Reader Service Card.

WESEL PROOF PRESS

Descriptive literature is available from Wesel Manufacturing Co. describing its EPP-4 proof press. Features of machine include automatic stopping and mechanical safety guards. Circle No. 345 on Reader Service Card.

ROUSE CATALOG

Band saws, miterers, lead and rule cutters, composing sticks, and type gauges are discussed in a catalog prepared by H. B. Rouse & Co. Circle No. 337 on Reader Service Card.

LINECASTING MAT ALIGNER

Literature has been prepared by Fisk to describe its Align-A-Mat, a device for aligning old or worn mats on Linotype and Intertype machines. Circle No. 352 on Reader Service Card.

PROTYPE FOLDER

An interesting folder concerning Protype lettering is available from Mergenthaler Linotype Co. Used for ads, layouts, presentations, magazines, posters, and bulletins, Protype is offered in 10,000 type styles and sizes. Circle No. 347 on Reader Service Card.

MOHR SAW BOOKLET

Cutting Composition Costs is the title of an illustrated booklet being offered by Mohr Lino-Saw Co. Mohr composing room saws are described. Circle No. 342 on Reader Service Card.

Platemaking

STA-HI COLOR AIDS

Descriptive literature regarding aids in the production and register of color plates has been made available by Sta-Hi Corporation. Information regarding a plate mounting system, register punch, router bit, router bit grinder, and plate rack is given. Circle No. 330 on Reader Service Card.

UNIVERSAL CONTACT SCREEN

An attractive bulletin giving a complete description of the Caprock Universal grey contact screen has been prepared by Herbst & Illig. Characteristics, applications, and operational techniques are included. Circle No. 314 on Reader Service Card.

VARN CHEMICALS AND SOLVENTS

A four page folder in two colors has been prepared by Varn Products Co. Inc. Listed are 20 chemicals and solvents manufactured by Varn for printers and lithographers. Circle No. 325 on Reader Service Card.

EXPOSURE COMPUTER

The Eastman Kodak Company has announced a revision of its Graphic Arts exposure computer which can be used to determine correct exposure times for halftone negatives, color separation negatives, and other Graphic Arts materials. Included is a dial computer, a reflection density guide, calibration record sheets, and a 12-page illustrated instruction booklet. The computer, which lists for $2.50, is available from Kodak Graphic Arts dealers.

GRAVURE CYLINDER SIZES

A guide to gravure cylinder circumferences and diameters has been produced by General Gravure Service Co., Sub. Modern Engraving and Machine Co. The center spread of the four page folder is a chart on which is listed cylinder circumference and related diameters of gravure cylinders. Cylinder operations are illustrated. Circle No. 313 on Reader Service Card.

COLOMAT FOLDER

A two color folder which includes features and uses of Colomat photographic proof paper is being distributed by Unitronics, Incorporated, Sub. Universal Match Corp. Colomat direct positive film is a colored transparent acetate. System is said to aid in interpretation and correction of color separations before plates are made. Circle No. 306 on Reader Service Card.

KEMP STEREO AND REMELT POTS

Kemp gas or electric fired stereo and remelt pots are described in Bulletin IE-10 available from C. M. Kemp Mfg. Co. Units are said to heat metal from inside pot and provide even temperature and reduce dross formation. Circle No. 351 on Reader Service Card.

MONOMELT ROTARY SHAVER

Information pertaining to a hydraulic rotary shaver for handling electros, stereos, metal base, plastic, and wood has been released by Monomelt Company, Inc. Machine is said to have an 18 in. by 24 in. capacity with a shaving range from 0.140 in. to 1.0 in. An accuracy of 0.001 in. is claimed. Circle No. 339 on Reader Service Card.

LAKE ERIE DIRECTOMAT

A bulletin is available from Lake Erie Machinery Corp. concerning its Directomat hydraulic mat press for newspapers. Press is said to simplify molding of accurately registered color mats for ROP color. Circle No. 340 on Reader Service Card.

POSITIVE OFFSET PLATES

A two color folder in which are listed advantages and processing steps involved with 3M presensitized positive plates has been made available by Minnesota Mining and Mfg. Co. Illustrations are included. Circle No. 326 on Reader Service Card.

AMSCO CHASE CATALOG

The complete line of Amsco steel and aluminum chases is described in a catalog issued by American Steel Chase Co. Chases are electrically welded and have smoothly ground joints. Circle No. 338 on Reader Service Card.

Pressroom

DAMPENING ROLLERS

An eight page, two color booklet has been prepared by Minnesota Mining and Mfg. Co. to describe its dampening roller and sleeve system for use on offset presses with 3M plates. Circle No. 310 on Reader Service Card.

GREEN HORNET FOLDER

Specifications and operating features of the Green Hornet webfed, two color offset press are included in a folder prepared by American Type Founders. Press handles webs from 8 in. to 17½ in. wide at rated speeds up to 25,000 i.p.h. Circle No. 341 on Reader Service Card.

SCOTT PRESSROOM LITERATURE

Walter Scott & Co., Div. Wood Newspaper Machinery Corp., is offering information pertaining to its newspaper pressroom and mailroom machinery and equipment. Circle No. 331 on Reader Service Card.

NUMBERING HEAD MANUAL

An operating and maintenance manual for Force rotary numbering heads is available from Wm. A. Force & Co., Inc. Information regarding various numbering heads available for ticket and coupon work on high speed equipment is given. Circle No. 343 on Reader Service Card.

ADJUSTABLE SPEED DRIVES

In introducing its Ultraflex packaged machine drives, Cutler-Hammer, Incorporated, has prepared two booklets. One two-color booklet covers the M unit, while the other covers the E unit. Ultraflex E electronic drives are available in sizes from 1 h.p. to 40 h.p., and M models range from 1 h.p. to 200 h.p. Circle No. 358 on Reader Service Card.

(*Continued on Page* 94)

No matter what the bindery job . . .
folding, inserting, gathering, stitching,
trimming or hard binding . . . there is
a Dexter machine designed to do it.

And Dexter means dependability.
For through the years, our successful
progress has been based on specializing
in the development of bindery equipment.
This experience stands behind every
Dexter machine and every Dexter
representative. It is your assurance
of good equipment and good service.

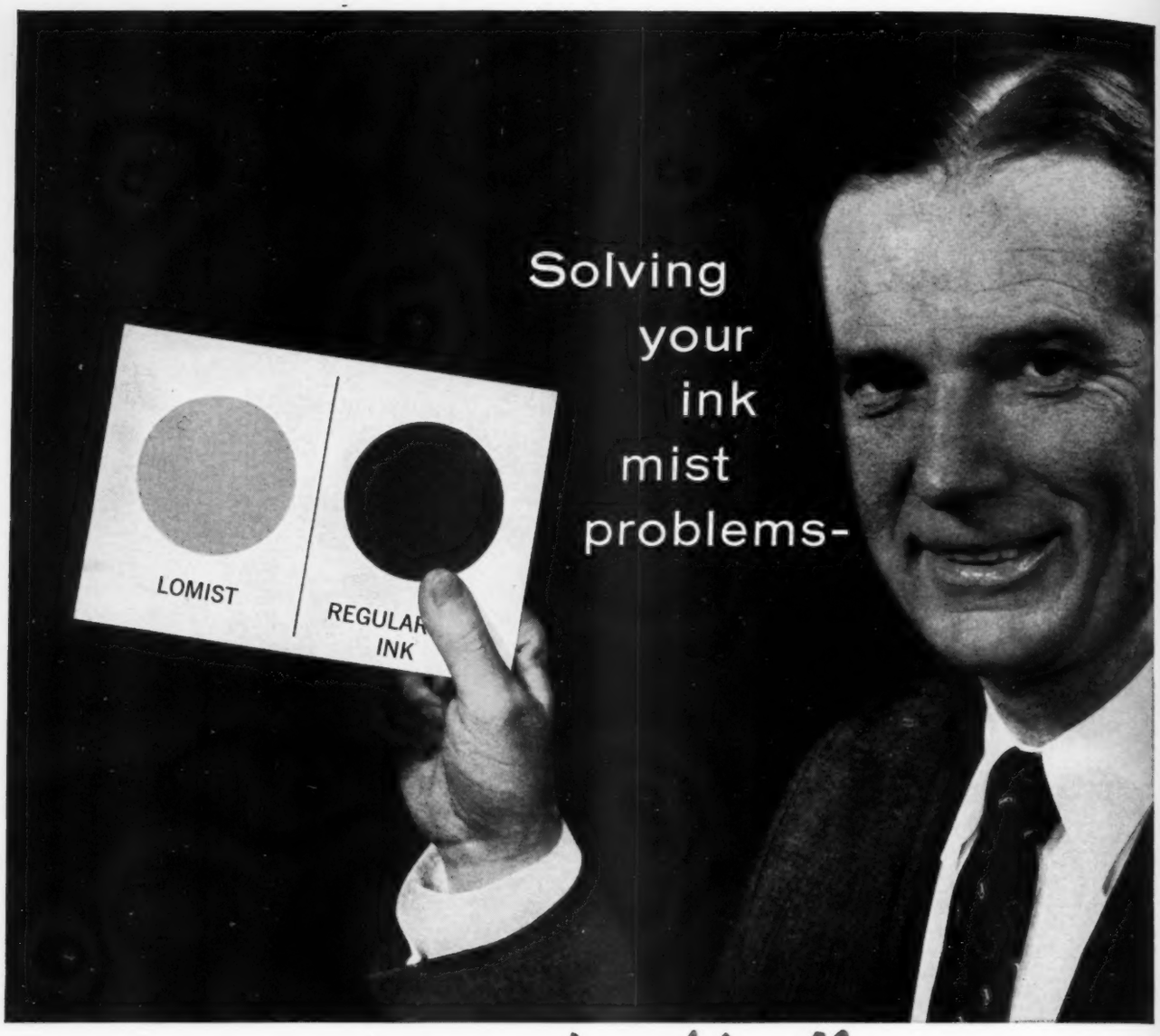
IT'S BINDERY EQUIPMENT . . . FOR A BETTER FINISHED JOB

CLEVELAND FOLDERS
DEXTER FOLDERS
CHRISTENSEN STITCHERS
McCAIN SIGNATURE FEEDERS
McCAIN TRIMMERS
DEXTER "300" ARM GATHERER
DEXTER ROTARY GATHERER
BRACKETT SAFETY TRIMMER
DEXTER BOOK BINDING EQUIPMENT

ALSO
Christensen Press Feeders,
Varnishing Machines and
Bronzing Machines.
Dexter Paper Feeders
and Cardboard Feeders.

A DIVISION OF MIEHLE-GOSS-DEXTER, INC.

GENERAL SALES OFFICE
219 East 44th Street
New York, New York
OFFICES in all principal cities



The Man from Morrill

introduces new LOMIST*... reduces ink mist 60 to 75%

Morrill's new LOMIST, the result of many years of laboratory research, has shown amazing results in actual comparison test press runs. This new special ink formulation will reduce the amount of ink mist in your pressroom from 60 to 75%, depending upon individual pressroom conditions.

Such a reduction of ink mist accumulations on your press, walls, and floor area will result in significant savings in maintenance—without any sacrifice in all the printing and performance qualities you always get from Morrill's standard news black inks.

Contact your Man from Morrill today and get the details on amazing LOMIST news black ink. Or write directly to Geo. H. Morrill Co., the organization with the nation-wide laboratory and pressroom facilities and 118 years' experience.

*U. S. Pat. 2750296 and other patents pending.

Sun

Branches in all principal cities

Geo. H. Morrill Co.

A DIVISION OF

Sun Chemical Corporation

750 Third Avenue, New York 17, N. Y.

Sun Chemical's Graphic Arts Group: GENERAL PRINTING INK *Gravure, Letterpress, Offset Inks and Supplies* GEO. H. MORRILL *Newspaper Inks* BENSING BROS. AND DEENEY *Flexographic Inks* RUTHERFORD MACHINERY *Lithographic Equipment*

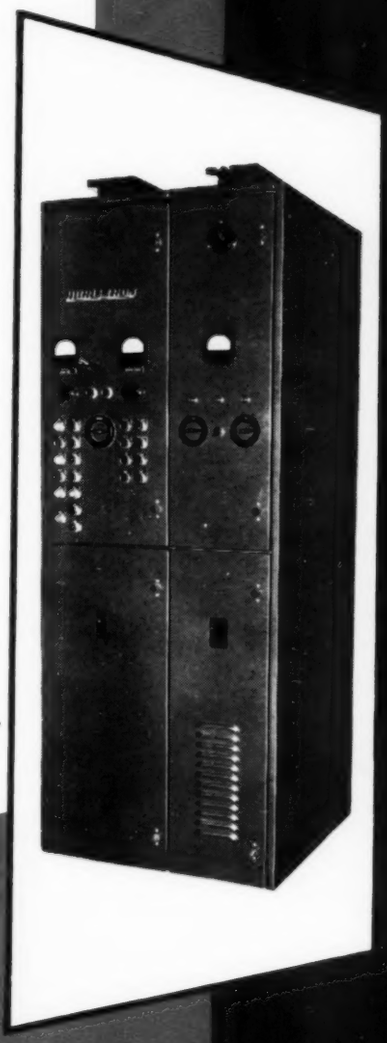
For More Information Circle 126 on Reader Service Card

90 INCHES HIGH

36 INCHES DEEP

18 INCHES WIDE
(PER FOLDER)

14 INCHES WIDE
(PER UNIT)



The most compact system on the market today

HURLETRON DC PRESS DRIVE

Within this compact cabinet is "shut-down insurance" for your presses against faulty mechanical operation, dirty relay contacts, or inadequate maintenance. Reliable . . . simple to operate . . . free from moving parts, the Hurletron DC Press Drive is a prerequisite for a trouble-free pressroom in magazine, newspaper, and rotogravure plants. Write today for complete information which shows why the Hurletron DC Press Drive is considered 10 years ahead of the field.

ELECTRIC EYE EQUIPMENT COMPANY DANVILLE, ILLINOIS

For More Information Circle 56 on Reader Service Card

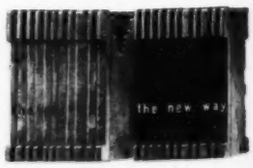
THE KEY TO SUCCESSFUL MATRIX PROCESSING

Matrix Contrast Service is based on highly skilled technicians and service crews, backed by 30 years of experience in this specialized field. The techniques employed by these Matrix servicemen have been perfected over the last three decades until today they are virtually foolproof.

This superior service is rendered on a continuous maintenance basis that includes both the original processing of your new and used matrices, and reprocessing according to pre-arranged schedules. We maintain round the clock shifts to assure that your production schedules will not be interrupted.

If you haven't already investigated the savings obtainable through the use of Matrix Contrast black-and-white and colored reference marks, send today for a free booklet describing our time-tested matrix maintenance plan.

MATRIX CONTRAST SERVICE
MATRIX CONTRAST CORPORATION
154 West 14th Street, New York 11, N. Y.
326 W. Madison Street, Chicago 6, Ill.
1105 Trenton Street, Los Angeles 15, Calif.



Copyright 1957
Matrix Contrast Corporation

For More Information Circle 114 on Reader Service Card

Rogers' Impressions Of

DRUPA 1958

An American printing consultant views European Graphic Arts show from standpoint of new developments in equipment and its effects on world-wide printing market.

By MARVIN C. ROGERS
Printing Consultant, Flossmoor, Ill.

THE capital of the printing world for two weeks in May was the city of Dusseldorf, Germany. It was the occasion of DRUPA 1958, that most fascinating of equipment shows devoted to the printing industry. Developments in printing machinery came out in the open during the show to give the printing world public a chance to view them under the best of conditions.

DRUPA was a fabulous display, one that must have impressed all who saw it and walked along the more than 25 mi. of aisles; whether they were a part of the industry or not. It seemed to this writer that DRUPA was more than an equipment show; it was a public relations medium as well. Certainly, the more than half million visitors could not all have been potential purchasers.

There is little doubt, however, that the European has a great interest and admiration for the printing industry. More than 600 exhibitors filled the 750,000 sq. ft. of exhibit halls with full sized operating equipment. Such a display could not help but impress all who saw it.

New developments were not numerous, but those who attended Graphic 57 had no difficulty in recognizing progress. There were many changes and significant developments in evidence. Futhermore, there was little doubt in the visitor's mind that emphasis in Europe is on sheetfed letterpress and offset

At top is view of exhibit building at DRUPA fair. Both structures in background housed press equipment. Below is aerial view of Duesseldorf, Germany exhibition grounds showing buildings which housed a great collection of printing equipment.

One of the modern exhibit halls at DRUPA Graphic Arts show held in Duesseldorf, Germany. Picture was taken as some of the printing equipment was being moved in for the two-week long exhibition.

presses, and on webfed gravure and flexographic presses. Flexography has been making gains as packaging and film printing have gained acceptance in the European market.

Two Italian job presses and a German sheetfed two revolution press by Koenig and Bauer, appeared to lead the parade for new presses with increased speed.

Heidelberg's display, featuring its new cylinder press equipped with a second color cylinder segment to print spot color from rubber, plastic, or metal plates, commanded some real attention from the visitors at the show.

A short visit with the design enginers responsible for these developments convinces one that the European manufacturers are seriously trying to engineer usable improvements into their equipment. Sales gimmicks are there to be sure, but the designs are intended to be functional. There seems to be little, if any more, direct cooperation between equipment builders in Europe than between their United States counterparts. However their number seems greater, and certainly no single European manufacturer has any solid grip on the market.

The incentive for good development comes from two sources, the competitor and the customer. In this case the customer is constantly faced with increased labor costs and increased material costs. No longer is the active European market blessed with the low cost labor of the pre-war period. Labor saving is becoming very important. One exhibit that impressed the writer was that of a bag filling machine for use in supermarkets. It operated at the end of the checker's belt, and would carefully place a variety of shaped packages into manila bags.

The equipment on display was generally well designed and manufactured. There is a real trend toward the two-color presses for example, with greatly improved feeders and deliveries. During a demonstration of one of the faster sheetfed presses, it was necessary for the writer to deliberately jam one sheet in the feeder to be able to observe the press under feeder difficulties.

If one were to make a comparison between European and United States practices, based on DRUPA exhibits, he might conclude that for both locations, there is a strong core of small sheetfed letterpress and offset shops making up the majority of the units in the industry. In the web printing field, however, there is a distinction that is real. Web gravure and flexography are common in Europe, while large web letterpress as well as gravure and offset units are common in the United States. This is undoubtedly the result of the language barriers and the limited availability in Europe of finer papers for average printing work.

A Look at Phototypesetting

It is not easy to evaluate development. Much of what was new at DRUPA had already leaked out, but DRUPA was the first official showing. Phototypesetting continued to find interested visitors, but the only thing new to them was the Linofilm system, a development of Mergenthaler Linotype Co. One got the impression that before this method of typesetting is fully accepted, it will receive a pretty thorough study of its economies.

It was interesting, too, to find that the typewriter as a composing machine was given no prominence, and that it drew only mild interest and attention.

Composition in Europe still requires the conventional typeface. One new device, Optype, from France applies to typewritten copy. It permits copying and justifying lines of typewritten matter at a rate high enough to avoid the second typing of copy usually needed to produce a justified line.

One of the most interesting of the developments shown anywhere, was the nylon plate demonstrated by FOGRA, the German Graphic Arts Institute in Munich. The large number of visitors at the FOGRA stand observed demonstrations which were simple, easy to apply, and capable of wide application. Finished plates were prepared from offset-type negatives in approx. 10 min. The demonstration was the result of many years of research and development at the Institute to provide a process applicable in the small shop using flat plates. It is not yet ready for commercial application, but it does appear to be ready for some field testing.

Electronic Machines Shown

Scanners for engraving and color correction were commercial models ready for use by the industry. Europe was a little late in entering the scanner development activity, but now has some machines with excellent possibilities. Hell and his several Klischographs is able not only to engrave on plastics or metal on a same size basis, but this year introduced the Vario-Klischograph capable of reducing or enlarging from copy. With a color adapter, it will produce three-color or four-color engravings on metal. For high quality color work applicable to all printing processes, Hell showed the Colorgraph as a commercially available machine for the first time. The Colorgraph produces corrected separations from raw camera separations and should fill the needs for a wide variety of color work.

Crosfield, the London electronics manufacturer of register and color control instruments, exhibited an electronic scanner working model which is to go into use in a large English gravure house. Crosfield, like Hell and RCA in the United States, has chosen the camera separations as raw material for its machine which produces color corrected separations.

The Swiss Elgram and the Fairchild machines were prominently displayed.

Photocomposing Machines

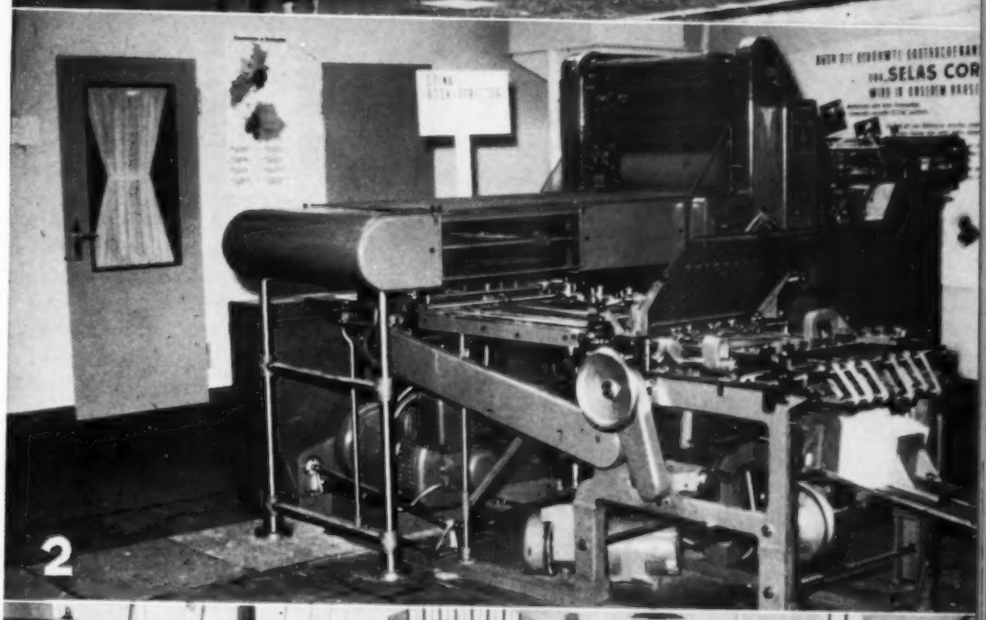
The step and repeat photocomposing machine has gone fully automatic. One French prototype was operating from punched cards with an accuracy, said by the designer, to be well inside one halftone line. Consolidated International, an American firm, displayed the Swedish photocomposing machine capable of being programmed for automatic operation. The European preference for the horizontal equipment remains evident, probably because of the smaller sized plates in use in Europe. The idea of programmed plate printing should appeal to United States users of photocomposing machines.

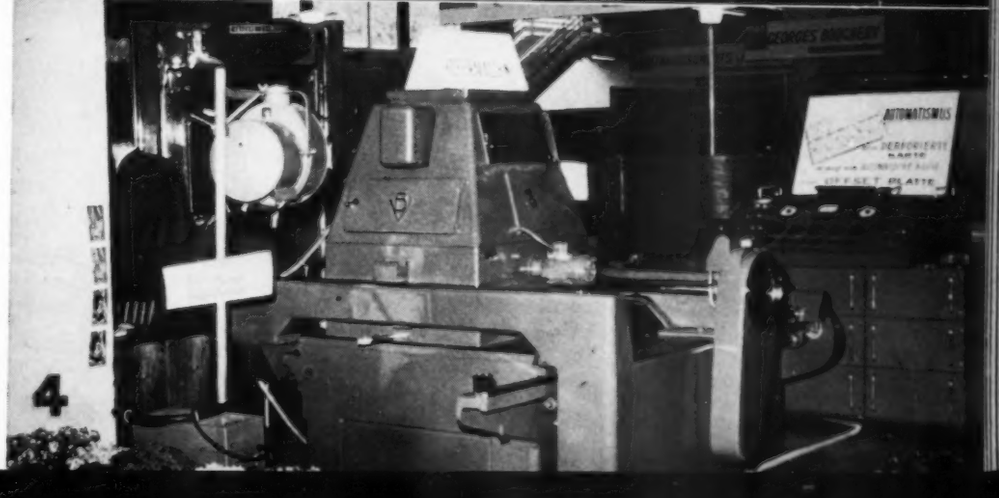
Press Equipment Viewed

It is when one views the press equipment at a DRUPA exhibition that the distinction between printing for a large one language market like the United States, and a multilanguage European market becomes obvious. Emphasis on sheetfed letterpress and offset presses was clear. Speed, a word well known in American printing, was stressed for job presses by Andreotti and Sarogla of Italy, and for two revolution presses by Koenig and Bauer in Germany, whose Condor press with a sheet size of 24¾ in. by 25¾ in. is designed to operate at 4600 sheets per hr.

Heidelberg, is in the field with a two color press printing text and black illustrations flatbed, and a second spot color from a cylinder section holding rubber, plastic or metal plates. The Miller Printing Machinery Co.'s display was unique in that press equipment was in

(*Continued on Page* 69)





Views of the DRUPA Show

(1) American-made equipment was displayed by Harris-Intertype Corp. in this specially-designed modern building. (2) Sheetfed offset perfector press exhibited by Swedish manufacturer included folder attached to press. (3) Heidelberg platen and cylinder presses were demonstrated in this exhibit hall. (4) French automatic step-and-repeat machine. This prototype model operates from control console (background) into which a punched card is placed giving information on image positioning, exposure times, etc.

Communications in research, powderless etching, web printing, and current problems are considered at Chicago meeting.

R&EC EXAMINES

New Produ

A NEED for better communications between "the man who is paying the bills" and research people was the keynote message of the 8th Annual Conference of the Research and Engineering Council of the Graphic Arts Industry which was held at Edgewater Beach Hotel, Chicago, May 21-23.

Businessmen need to understand what research is endeavoring to seek, said the keynoter, Dr. Samuel H. Caldwell, Massachusetts Institute of Technology. They have got to be made to understand what the scientist is attempting to find.

He charged men in scientific research of being guilty of "bad communications" with management—the men who are paying the bills. There is a need, he later added, for a choice of simpler words and simpler diagrams on the part of research men in communicating with businessmen. He also thought that research men should talk with businessmen and businessmen should be willing to listen.

Dr. Caldwell advised: "Choose your research program and research people almost as carefully as you do your banker—and then trust them." He noted there are very few units in the Graphic Arts capable of supporting research. It takes a cooperative effort, he said.

Part of the keynoter's opening address was devoted to the need for research. He cited as an example the problem of ink rubbing off onto a person's hands when he reads the daily newspaper. This will not be solved, he commented, by mixing up a new batch of ink.

Cornelius is New President

Elected to the presidency of the R&E Council was George H. Cornelius, jr., president, Cornelius Printing Co., Indianapolis, Ind. He succeeds Felton Colwell, The Colwell Press, Minneapolis, Minn. (For other newly-elected officers, see photo on this page.)

The Council will hold its 1959 conference in New York City at the Sheraton McAlpin Hotel, May 18-20.

Visitations to Graphic Arts facilities were again a feature of the annual conference. This year tours were scheduled to Goss Printing Press Co., The Inland Press, and Ludlow Typograph Co.

Those in attendance at the R&E Council meeting were treated to up to the minute reports on the DRUPA printing equipment show which had just concluded in Dusseldorf, Germany. The exhibition was described as a great collection of Graphic Arts equipment by Howard Seel, Harris-Seybold Co., Div. of Harris-Intertype Corp.

Seel stated the show may have reached a record from the standpoint of attendance and printers from all parts of the world displayed enthusiasm for the equipment exhibited. He said there were many manufacturers for each classification of products and thought this was a good sign for it would result in good product development through competition.

His technical impressions of the equipment shown were: Good clean design; good construction; there appeared to be a trend to multicolor presses; increased machine production through continuous delivery and better sheet handling; better use of controls; interest in powderless etching machines; more use of electronics in machines; there appeared to be a trend to larger sheet sizes (up to 63 in.); more coated stocks being used; and printing from a common impression cylinder.

The speaker remarked that European products in the Graphic Arts industry are not quite as good as the U. S. products. He added: "We must work hard to gain means of lower production at lower costs."

A great deal of German interest was evidenced by T. Blair Hawkes, T.W. & C.B. Sheridan Co., who also reported on the DRUPA show. He looked at the exhibition from the standpoint of the bindery equipment displayed.

Most bindery equipment, Hawkes said, was aimed at the European market. He said American bindery machines enjoy a good reputation

New officers of the R&E Council, left to right, are: C. L. Jewett, Minnesota Mining & Mfg. Co., St. Paul, vice president; Alan S. Holliday, Craftsman Press, Inc., Kutztown, Pa., vice president; George H. Cornelius, jr., Cornelius Printing Co., Indianapolis, Ind., president; Felton Colwell, The Colwell Press, Inc., Minneapolis, Minn., retiring president; and Ray Spiller, Harris-Intertype Corp., Cleveland, secretary. Not present for picture because of attendance at DRUPA show was Paul Lyle, Western Printing & Litho Co., Racine, Wis., new treasurer.

By EDWARD H. OWEN
Associate Editor

dition Processes

in European countries. However, printers in Europe consider all American equipment as Rolls Royce —they can't afford it. Some American bindery techniques, he added, have been put into practice in Europe.

Hawkes was impressed at the great number of flatbed paper cutters. He said everyone manufactures them and thought that a lot of engineering hours could have been spent on development of other machines.

Most all presses were sheetfed, he said. European manufacturers are paying a lot of attention to safety devices on their machines. He also noted a lot of folder manufacturers in those countries. There is considerable activity, too, in development of magazine trimmers. One machine that impressed the speaker was of Dutch manufacture. It was designed to fold and band newspaper magazines at speeds up to 9000 per hr.

Another report on DRUPA was provided by Dr. Marvin C. Rogers, Graphic Arts consultant, whose story of the DRUPA show appears on page 23 in this issue.

Web Offset Experiences

A feature of the R&EC meeting was a session devoted to webfed printing by the various major processes. It consisted of a panel discussion in which several industry executives participated. Chairman of the meeting was George Harper, MacLean-Hunter Publishing Company, Ltd., Toronto, Can. The subject of web offset printing was handled by David Safran, vice president, Safran Printing Company, Detroit. The Safran company has been successful in application of the webfed, heat-set lithographic process in its operations which includes magazine printing.

In describing the process, he said, ". . . unlike letterpress you don't squeeze the life out of the paper and plates, as you squeeze the ink into the paper. What you really do in heat-set lithography is just smooth the ink on the paper, dry it hard and glossy, *on* the paper not *in* it. This means that a story on page 42 stays on page 42. It doesn't try to stick its nose into a page 41 article."

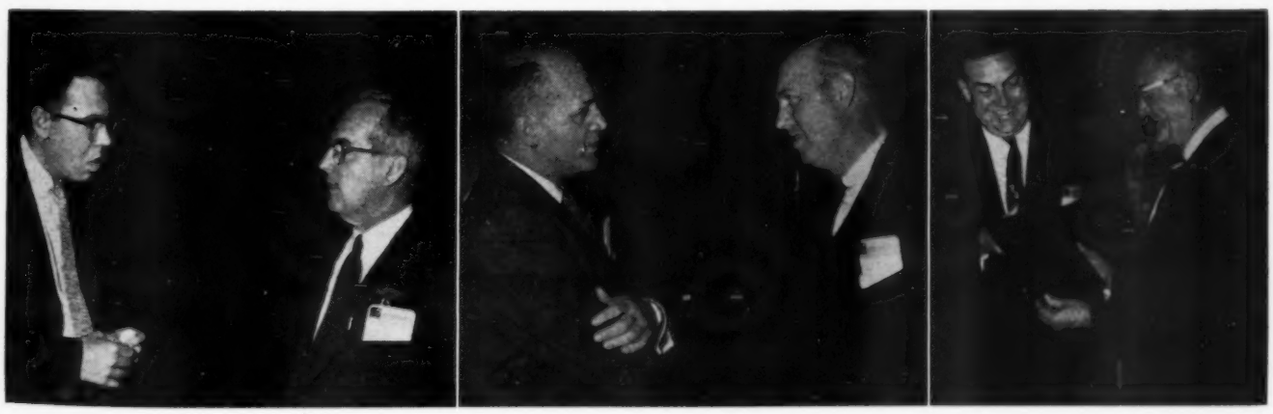
Safran went on to mention other important advantages of webfed offset printing. In comparing it with sheetfed printing, he mentioned that paper purchased in rolls effects a saving of about 20%. Even allowing for waste in the faster roll-fed presses, he added, you can expect at least a 10% savings on paper costs.

There are savings in other departments, too. For instance, fine screen 133-line editorial halftones for lithography cost less than coarse screen 65-line zinc engravings for letterpress. Lithography being a photographic process can very easily, and therefore economically, enlarge or reduce any good advertising copy.

The speaker claimed there is no wear on plates by this process. "We can run and rerun an ad every issue if necessary, and the plates will last forever."

He went on to mention that the process delivers a product that is completely dry. Also, the process delivers a product that is folded and ready for binding. Four-color process can be inserted without extending deadlines to the point of losing the sale. Finally, he claimed webfed, heat-set lithography quality is superior to rotogravure and letterpress rotary printing.

Safran cited several statistics as



Informal Chats and a Presentation at R&E Council Chicago Meeting

Left to right are: Bob Wentworth, R. R. Donnelley & Sons Co., Chicago; Dr. Marvin C. Rogers, consultant, Flossmoor, Ill.; George C Schaefer, Schaefer-Shepherd, Inc., Los Angeles; Gilbert Stevens, Minnesota & Ontario Paper Co., Minneapolis, Minn.; George Cornelius, Jr., Cornelius Printing Co., Indianapolis, Ind., presenting plaque to retiring R&EC president, Felton Colwell, The Colwell Press, Inc., Minneapolis, Minn.

applied to the webfed offset printing operation in his plant. Makeready of a four-color perfecting job—eight plates 22¾ in. by 35 in.—takes four to six hours. Ink comsumption is about the same as sheetfed lithography, but inks cost one-third less and look better because the heat-set principle dries the ink on the surface of the papers and no spray is required or used.

Paper used is a larger variety than is permissible by sheetfed, because heat-set lithography uses rolls and thinner, cheaper papers print a beautiful selling image, said Safran. Paper spoilage will range from 12% on million runs to 30% on 50,000 runs. Runs below 100,000 possibly, and below 50,000 positively, do not belong on these presses. Unless there is a series of runs for each job, totalling more than that, the job will cost more.

"We like Lithengrave plates best," the speaker commented. "We use them because the negative preparation for full color printing is easier than the more popular positive process. It is a grainless plate with excellent qualities all around.

"The folder is, of course, no trouble and saves the cost and time of conventional folding. These folders deliver four sizes: 11⅜ in. by 11-2/3 in.; 11⅜ in. by 8¾ in.; 11⅜ in. by 17¾ in., and 17¾ in. by 5-11/16 in.

Rotary Webfed Letterpress

Almost a rebuttal to Safran's talk was one given by William E. Ward III, Baird-Ward Printing Co., Inc., Nashville, Tenn. He spoke for rotary webfed letterpress and based his remarks upon experience gained in this operation in his plant.

The Baird-Ward company prints telephone directories, church literature, and magazines by this process. It produces 12¼ million magazines per month and employs 550 people.

Four webpresses are operated by the Nashville firm: one Hess & Barker, two Cottrells, and a new Goss press. The company is installing another Goss press. Ward said his company trained its own men in rotary operation.

On cost of webfed operation, he said: "We project it on our equipment being 80 to 85% productive. Under that we lose money. Don't be afraid to set this high figure."

He described the new Goss press being installed as capable of doing two-color work at speeds up to 1500 f.p.m. It consists of six units; two jaw folders. Baird-Ward uses 0.004 in. overpack on impression cylinders and set plates

"I understand you operate roll-fed presses."

0.002 in. under the bearers (plus or minus 0.02 in. makeready). Offen driers run at oven temperature of 600 to 650° F. to give web temperature coming out of oven of 325° F.

Ward said they have found increased speeds account for increased waste and are presently studying the problem. He added they are suspicious of starts and stops as one big factor in this problem. They are also engineering a speed increase to 1750 f.p.m.

When to Use Rotogravure

Rotogravure printing, third of the major processes, was represented on the panel by Charles Edson, Kable Printing Co., Mount Morris, Ill. His talk consisted of an explanation of the problems and the procedures that are necessary to produce a rotogravure signature.

In determining when to use rotogravure, Edson offered the following advice: "If the run is 200,000 upward, and if the content is a lot of illustrative material, gravure printing should be considered. If color work must be produced with great fidelity to copy, gravure is again indicated.

"Paper costs sometimes make gravure preferable as a very fine reproduction is possible on a super sheet, and a good reproduction can be given on roto newsprint."

The first installation of gravure at Kable was in 1937. At the present time the company operates four gravure presses consisting of 28 printing units. Three of these presses will print four colors on both sides of the web for a total of 48 standard magazine pages, all in four-color process. The other would deliver two colors on each side of the web. Two of the presses will produce 96 pages of monotone—one of them with an additional color on one side of the web. All of the presses are equipped with flying pasters and the web speeds are from 1000 to 1200 f.p.m.

Problems with Gravure

At Kable, conventional gravure is used for monotone work and the Dultgen hard dot system is used for color work. The speaker impressed the importance of web tension control in rotogravure printing. He said the problem is greater in gravure than in letterpress due to the distance between printing units and the consequent tension required. The project is being actively worked on by Gravure Research, Inc. Any improvement in tension control will reduce waste, he added.

Allowances of about 3% more for spoilage in gravure than in web letterpress are necessary. Edson said efforts are being made to eliminate the use of carbon tissue as it is the "worst of the bad boys of rotogravure."

The speaker added that Du Pont is working on development of its Rotofilm to replace carbon tissue. Also, there is the Henderson method in which a light sensitive coating is applied to the cylinder similar to that used in photoengraving. Edson commented that this latter method has been successful in the converting field, but seems impractical on the large cylinders used in publication work.

He mentioned two European methods under development for cylinder correction after chroming. Cell depth and tone are decreased by plating a portion of the bottom of the well rather than by burnishing, a rather difficult correction particularly on flat tones and in light areas. These methods also increase depth by re-etching through chrome. This system gives

the pressroom much better cylinders to run. He added that Kable is also able to make slight tone reductions by the application to the chromed wells of a lacquer insoluble in ink.

Basic Aims of Printing

Cost, quality and education should be the basic aims of the printing industry said the final speaker on the panel, J. Russell Parrish, Meredith Publishing Co., Des Moines, Ia.

He said the printing industry is looking for lower plate costs because a large percentage of the cost of a job is spent in the preparation departments. The speaker thought plate costs could be reduced by making better plates. This would result, he added, in fewer make overs. Also, the cost per plate is not too important if the plate is made properly.

On the subject of makeready costs, Parrish suggested that single runs (once through the press) will cut makeready costs in half. Premakeready, pre-register and tension lockup are other cost reducing means.

Concerning the trend to higher press speeds, the speaker said it will make automatic controls necessary. He recommended investing money into modern equipment to achieve the high productivity demanded.

The Meredith executive remarked that the salvation for letterpress is proper application of science. Other processes, he added, have been ahead of the letterpress process in this respect. Letterpress has only awakened in recent years.

For better quality work, he suggested: Better press packing which will withstand pressure and have quick recovery time; ink field studies on receptivity, dwell time, drying, mileage tests, misting, etc.; finer tolerances; more accurate printing plates for levelness.

Parrish noted that it isn't easy to train people. The education process starts, he thought, with those responsible for selecting equipment. Any plant with 200 employees or more should have an engineer on the payroll. The success of your program, he concluded, depends on how well you educate the men who will turn out the work. Some programs fail, he thought, because they are pushed too fast.

Attending the R&E Council Meeting

Nelson P. Mitchell, McArdle Printing Co., Washington, D. C.; Sam Weil, Keller-Crescent, Evansville, Ind.; Ed Blank, New York Employing Printers Assoc., New York, N. Y.

Frank A. Freeman, Western Newspaper Union, Chicago; Martin Blumberg and Henry Burr, both of American Book-Stratford Press, New York, N. Y.

Frank Bonner, Rolled Plate Metal Co.; Phil A. Tatusko, International Business Machines Corp.; James Johnson, Tenak Products Co.

The Breakeven Point

The panel was quizzed on several points at the conclusion of the prepared talks. One question from the audience dealt with the press run breakeven point in webfed offset printing. Safran answered that it depends on the type of press. He suggested the run should be enough to occupy the time of a full shift of workers for single color work.

Another Council member said his plant was trying to find and obtain an accurate count of the signatures delivered to the bindery. He asked for suggestions from the panel. Parrish remarked it was not possible to go by the total count on the press counter. In the Meredith plant, he added, they keep accurate records of the pounds of waste on a run and adjust this figure to the length of the particular run. On long runs of approximately four or five million, Edson said, Kable obtains the bindery count and then adjusts its print order at the end of run.

How widespread is the problem of wrinkle in webfed printing, the panel was asked. Parrish said if they get good stock they rarely pick up wrinkles. Heating up of the drying ovens will cause it, he said. Ward remarked that excessive heat in the dryers will cause this condition. Harper added it was caused by variations in temperature and relative humidity.

Powderless Etching Process

One of the important subjects up for discussion at the Chicago meeting was powderless etching of photoengravings. A six-man panel, headed by Edd Shipley, Kingsport Press, Inc., Kingsport, Tenn., discussed the various processes currently in use.

A new lease on life was the way E. W. (Ted) Thomas, Speaker-Hines & Thomas, Inc., Detroit, described powderless etching for the letterpress field. He told how his company has sought means of improvement if they were to continue as letterpress printers. An excur-

(*Continued on Page 70*)

By EDWARD I. PETERS, *President, Process Engineering Co.*

(Photographs courtesy Chicago *Sun-Times*)

Some Plain Talk About

NICKEL-PLATING of STEREOS

RAPID strides in newspaper ROP color printing has focused more attention on nickel-plating of stereotype plates. Many factors contribute to the quality of a good color reproduction, and one of these is the process in which the stereotype color plates are nickel-plated.

The fundamental purpose for which stereotypes are nickel-plated is to increase press life. The industry has come to accept 40,000 to 50,000 impressions as typical of the life of an unplated stereotype.

With nickel plating, press runs in the hundreds of thousands of impressions are common, and runs over a million impressions are realized in several commercial printing plants. With color printing the ability of nickel plated stereotypes to resist the corrosive nature of colored inks is required to insure printing quality.

Process is Speeded Up

Early nickel plating processes were suitable only to applications where time was not a critical factor. In the newspaper field stereotype nickeling was practiced first for comic supplements which could be printed well in advance of distribution. Under these circumstances a plating process that required from 45 min. to more than 1 hr. was not critical, but simply a production time factor that had to be accounted for in planning. Obviously these plating rates are not compatible to newspaper ROP color as it is now known.

Today it is possible and customary to deposit nickel on stereotypes in 7 min. or less. A recent installation in one plant has been designed for a 3 min. plating cycle. Tests made on this installation have proved that a 2 min. plating cycle is both practical and adequate.

Considering the cleaning and rinsing cycles involved in the overall process, it is now possible to deliver color plates from the foundry to the pressroom in only 8 to 10 min. longer than is required for conventional black and white plates, barring any additional routing that may be required. With no more delay than this it is possible to run color work simultaneously with and on the same pages as regular news stories.

When To Install Nickel Plating Facilities

A question that often confronts newspaper management is whether or not to install nickel plating equipment. Our purpose here will be to comment on some factors contributing to the final answer.

Each newspaper must establish its own standard of quality in color printing. One authority on ROP color said unplated stereotypes begin losing color quality after as few as 5000 impressions. The number of impressions at which this loss becomes sufficient to justify nickel-plating is a matter of opinion, depending entirely upon the standard set by the newspaper.

Different newspapers have different pressroom procedures that affect the number of impressions that can be obtained from color stereotypes and yet meet a given color standard. The newspaper stock, printing impression, and the specific nature of the inks used each have a bearing. Under given pressroom conditions and color standards it is the number of impressions expected from each plate rather than the total distribution of the newspaper that determines whether or not plating should be used.

As a newspaper enters the ROP color field and finds that nickel-plating is required to produce the quality desired, the usual decision is to have the plating done by a commercial plater. The satisfaction with such an arrangement, or lack thereof, depends largely on the price charged and the service rendered. These will be considered separately.

Each organization, when considering a capital investment, must compare the anticipated cost of operation of the new system with the cost of alternative methods. By this comparison the potential savings may be anticipated.

Considering Commercial Platers

The total cost of having stereotypes plated by a commercial plater can be measured by considering the following:

(1) The amount billed by the plater.

(2) The cost of transporting the plates to and from the plater.

(3) The cost involved in having to plan in advance of press date, and then being rigidly inflexible should the need for last minute changes arise.

(4) The cost of not having plates back from the plater by press time.

(5) The cost of not doing color work simply because a newspaper lacks capacity or ability to schedule closely. This cost, while difficult to measure, is potentially very high because it can conceivably drive business into the hands of a competitor not having this limitation.

Electroplating Costs

The factors which go to make up the cost of electroplating are as follows:

Equipment Cost—The initial cost of all equipment and materials required for the vast majority of newspapers to begin nickel-plating falls

in the range of $9000 to $12,000. It is conceivable that some smaller installations might be made, but no substantial reduction can be made from the minimum figure if one of the modern high speed systems is to be used. The ultimate in plating equipment for a newspaper would be a full automatic plating conveyor capable of processing about 80 plates per hr. Such equipment would have a total cost of about $23,000.

Installation Cost — The installation cost obviously depends on the amount of plumbing, electrical, masonry (in the event an acid proof brick floor is installed), sheet metal and other work required. Labor and materials would run less than $1000 under only the most ideal conditions, and could run as high as $3500.

Labor Cost—Labor costs will depend largely upon local wage scales and shop rules. It is estimated a single operator can nickel-plate between 20 and 28 newspaper stereotype plates per hour with a manual operation, and up to 80 plates per hour with automatic equipment.

Service Cost—Power and steam (when available) costs are generally moderate and constitute a small portion of the over-all cost. Much will depend upon the frequency with which the system is put into operation and the number of plates processed each time.

Maintenance Cost — Assuming properly specified equipment has been installed, equipment maintenance cost should be negligible. Equipment should require no more than 1 or 2 hrs. a month routine maintenance. Analysis and solution maintenance should not require more than 1 hr. per week.

Material Cost—The most costly material involved in nickel plating is nickel anodes. Consumption is directly proportional to the amount of work processed, and may be estimated at $4.50 per 100 plates. All other material costs in a plant averaging 200 plates per week should approximate $500 per year.

Space Cost — Many accounting systems charge various departments with the floor space occupied. A nickel plating system usually requires about 300 to 400 sq. ft. of floor area.

Layout and Location

Nickel plating systems for newspaper stereotypes generally fall into one of two layouts: A U-shaped arrangement or a straight line system. If a corner location is available an L-shaped plan may have advantages. Generally speaking, a U-shaped system is more efficient as there is less walking required of the operator. The over-all area is about the same in either case.

Other factors to consider in location are:

(1) An outside wall or top floor location is desirable to minimize the duct run from the cleaning tank.

(2) Adequate drainage facilities should be available. At least a 3 in. drain line is recommended. Special corrosion resistant drain pipes are not essential provided care and precaution are exercised when dumping quantities of acid solutions.

(3) The plating area should not be subject to contamination from adjacent areas. Heavy dust conditions should be avoided. Also avoid location near open routers.

It should be mentioned that the reverse problem, i.e., contamination of adjacent areas, is generally nonexistent. Many nickel plating systems are installed without partitions isolating them from other operations. No objectionable fumes are present. Providing there is a good exhaust system on the cleaner tank there is no problem from excessive humidity.

Plating Capacity

In estimating production capacity of a proposed plating installation it is the short time requirement that should be considered. Newspaper production is apt to be concentrated into a few hours. Therefore, it is the number of plates per hour that should be the basis of capacity specifications.

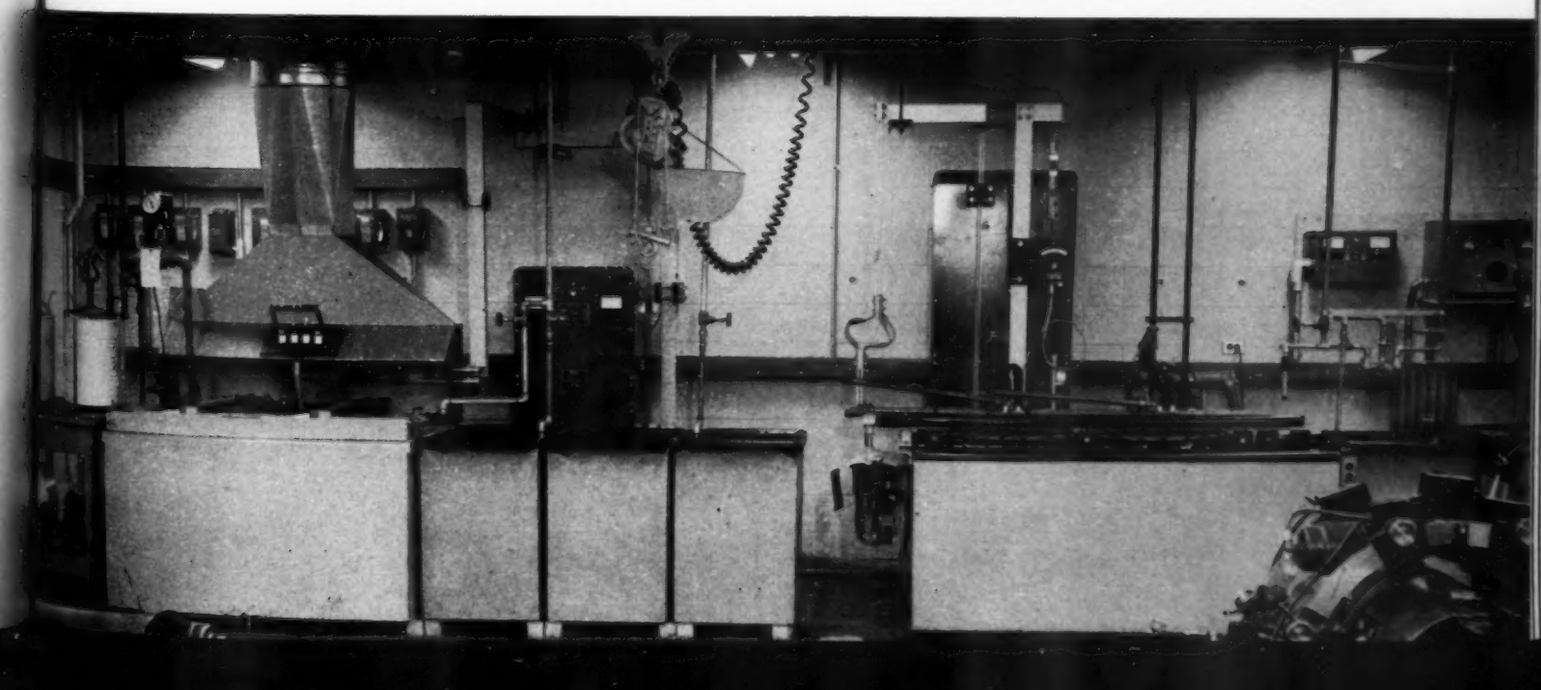
Most newspaper requirements can be met with a two station tank, each station handling two standard size newspaper plates. Such an installation with a single operator can, as noted previously, turn out from 20 to 28 plates per hour.

An important factor is the thickness of nickel required. Newspaper requirements can usually be satisfied with deposits 0.0002 in. to 0.0004 in. thick. With modern processes these thicknesses can be produced in 2 to 8 min. in plating bath.

Plating Process

As of this writing there are only two plating processes which are giv-

A nickel plating installation on a daily newspaper. Workflow in the plating process begins on racking table at far left. It proceeds in a straight line to the following equipment: Alkaline cleaner tank, rinse, acid dip, rinse, nickel sulfamate plating tank, rinse, and unracking table.



Plates are lowered into alkaline cleaner tank by means of overhead hoist. Reversing switch on exhaust duct changes tank polarity. This is only tank requiring ventilation.

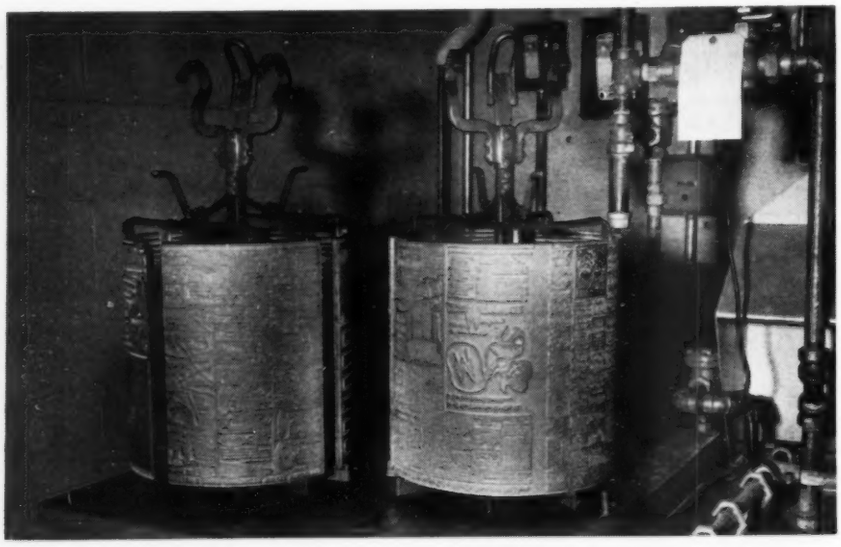
en serious consideration in new nickel plating installations. They are the nickel fluoborate process and the nickel sulfamate process.

The nickel fluoborate process was the second of the high speed plating solutions to be used for newspaper production. Its fore-runner was a multi-component system which required complicated chemical analyses for proper maintenance. The simplicity of control was more than sufficient reason for the fluoborate process to replace the original "rapid nickel," as it was called. The nickel fluoborate system is widely used in the printing field.

About 10 years ago the relatively non-corrosive nickel sulfamate bath was developed. It, too, is essentially a single component bath which is simple for an operator not familiar with chemistry to control. The sulfamate process inherently produces the lowest stressed deposit of any nickel plating process, and in stereotyping these deposits are capable of extremely long press runs. There are about 80 nickel sulfamate installations in the Graphic Arts in the U. S. and Canada.

Factors To Consider In A Plating Installation

Process—A modern process that is easily controlled and operated is the most important single factor to consider in purchasing a nickel plating system. Stereotypers are not chemists, nor are they electroplaters. Therefore, the process must be sufficiently simple that operators totally unfamiliar with electroplating can be taught routine operating and maintenance in one visit.



Stereotype plates racked on special work rods ready to begin plating operation. Rack at left accommodates four half page plates; rack at right accommodates two full page plates.

This consideration has particular value for newspapers not located in or near Chicago, New York and possibly a few other major cities. There are few experts in stereotype nickeling procedures; few qualified individuals who can be called upon if trouble arises.

Equipment—In purchasing equipment three major factors should be considered: Quality, capacity and cost. Neither quality nor capacity should be sacrificed for the sake of cost. The equipment cost range between premium quality and optimum capacity, and mediocre quality and tight design specifications, will rarely exceed 10% of the total cost of equipment and materials. Such a saving can hardly be justified in the face of the serious loss in time and production that could result from equipment breakdown.

Preassembly—The installation of a plating system is quite foreign to the normal work of the maintenance departments of newspapers. Preassembly of as many parts as possible is highly desirable.

Service—It is highly important to be sure the supplier of equipment and materials for a stereotype nickeling system is thoroughly familiar with the chemistry of the process used, all equipment offered, and printing requirements of the plated stereotypes.

Converting Existing Installations

Those newspapers having nickel plating systems of the slower old fashioned type frequently consider the possibility of converting them to a more modern process. It is the process that offers the advantages of greater speed, simplicity of control, and superior quality of deposit.

In some instances it is possible that one of the faster processes can be installed in the equipment originally purchased. Generally, though, at least the power equipment must be increased, and some of the tanks specifications may have to be changed. Whether or not the conversion of existing equipment is either possible or advisable should be discussed with the supplier.

Stereotype nickel plating has gone through the transition from an industrial art to a practical science. The advantages of stereotype nickeling are firmly established by the experience of many newspapers.

Economics of Labor Saving Machinery Show

COST OF PRESSWORK

Cost computations show what size press to purchase.

Second of a series by
J. W. ROCKEFELLER, Jr.,
J. W. Rockefeller, Jr. & Assoc.

IN THE first article of this series, the small sheetfed rotary press used in combination with rubber plates or (in the foreseeable future) wrap around plates was discussed. Its cost saving potential of 75% over the old flatbed press was explained in some detail.

The engineering improvement which made possible the hitherto unheard of speeds of this equipment was confined chiefly to the feed mechanism of the press. Feeding has always been a limiting factor on the production of sheetfed rotary presses and up until recently combined with the comparatively high cost of making rubber plates, to restrict its use on short runs.

As press speeds increase, the cost of presswork may become less important in comparison with other operations, such as paper cutting. This fact may be brought out by a single case which is hardly representative but interesting nevertheless. A company was purchasing new equipment and arrived at a point where it became necessary to decide between a 35 in. by 45 in. offset press and one half that size (22 in. by 34 in.). Through an arrangement with the paper merchant, the cost per pound of the paper was the same whether it was purchased in 29 in. by 44 in. sheets or 22 in. by 29 in. sheets.

The accompanying illustration shows graphically the cost comparison between the two methods of operation. It will be seen that in the case of printing a larger sheet and, subsequently, cutting it in half, the cutting cost very closely approaches the printing cost. The cost comparison does not take into consideration the cost of moving the larger sheets from the press to the guillotine cutter, since this cost is very difficult to estimate. It is there, nevertheless.

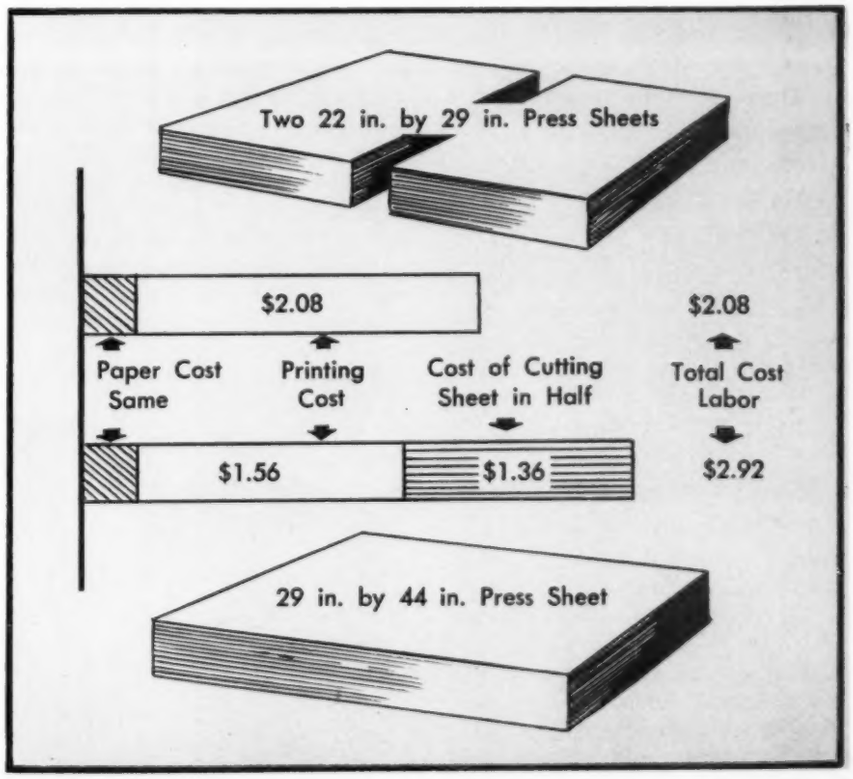
As presswork becomes cheaper, due to higher press speeds, the handling and cutting charge becomes greater by comparison. Where this can be reduced, substantial savings may frequently be made. Let us consider the economies in one of the new smaller web offset perfecting presses which slits and sheets to 8½ in. by 11 in. from a 17 in. web. Two such presses are operated in New York, N. Y., with crews of two men each whose combined earnings are about $5 an hour. The total all inclusive press cost per chargeable hour is $16. The press will produce 20,000 i.p.h., or 40,000 8½ in. by 11 in. sheets printed on two sides.

It will be seen that the cost thus works out to 40 cents per 1000. After the sheets come off the press, they must still be trimmed on three sides, but this is accomplished at the rate of about 100,000 per hr. at a cost of $7.50 per hour for the cutter, or about 7½ cents per 1000. The total cost of producing these is therefore 47½ cents per 1000.

Same Job; Different Press

Let us now consider the operation of a large sheetfed perfecting press producing this same item. The all inclusive cost is $35 per hour, and the press will turn out 5000 double impressions resulting in a press cost of $7 for 1000 sheets, 34 in. by 44 in. Each sheet will provide 16 8½ in. by 11 in. forms, so that the printing cost per 1000 is 44 cents. At $7.50 per hr. for cutting, the cutting will amount to 28 cents per 1000, a total cost of printing and cutting of 72 cents, compared with 47 cents for the small press.

In our comparison we have taken



Cost of direct labor to produce 1000 29 in. by 44 in. units in two colors on one side of sheet and to reduce to 22 in. by 29 in. sheets.

Above costs are based on press production of 5000 i.p.h.

At Speeds of	Cost, Large Sheet	Cost, Small Sheet
4000	$3.36	$2.60
3000	3.63	3.47

a sheetfed offset perfecting press, which while possessing certain advantages for this type work, is a rather rare animal in the printing industry. As a more common-place piece of equipment, let us take a single color 22 in. by 38 in. offset press, manned by a pressman and assistant, and operating at a speed of 5000 sheets per hr. one side or 2500 both sides.

A fair estimate of the all inclusive hourly cost is $16, the same as the small web press. The printing cost per 1000 sheets, 22 in. by 38 in., printed two sides is $6.40; per 1000 sheets, 8½ in. by 11 in., 80 cents. At $7.50 per hr. and 20,000 cut outs of the large sheet per hour, the cutting will cost 37½ cents and the combined printing and cutting $1.17½ per 1000.

Summary of Costs

Three items of equipment we have selected are actual cases in three different plants, all doing the same job by various methods. They are all located in high wage cost areas, and we believe that in all other respects, the comparison is a fair one. To sum up briefly, the cost by the three methods and taking the highest cost as 100%, we obtain the following interesting figures:

Press	Cost per M print and cut	
22 in. by 38 in. one side ..	$1.17½	100%
29 in. by 44 in. perfector ..	.72	61½%
Web perfector	.47	40%

The use of the web press will effect some slight savings in paper, and both the web and the perfector will show paper handling advantages over the one side press.

Making Comparison Complete

In order to make a complete comparison, we should include a flatbed letterpress on which the cost would be higher than any of those listed, but which is often used for the production of printed forms of the size under consideration. Taking into consideration all means by which these forms are currently being produced by various printers, the worst may very well be four or five times as costly as the best which, incidentally, does much to explain the general condition of our industry.

It will be argued, that the web-feb press does not possess the flexibility of the sheetfed press, and for this reason is not a practical press for the general printer. The counter argument would be that general printing is not a practical occupation. It should be kept in mind that a piece of equipment may be inflexible economically as well as mechanically, and while the "jack of all trades" equipment is becoming less practical daily, specialized equipment is being utilized more.

In serving large consumers of printing, we have converted thousands of business forms to 8½ in. or 11 in. in one dimension. The printer planning for the future must be guided by unmistakable trends, as well as by current practices.

(*To Be Continued*)

Two New Powderless Etching Machines

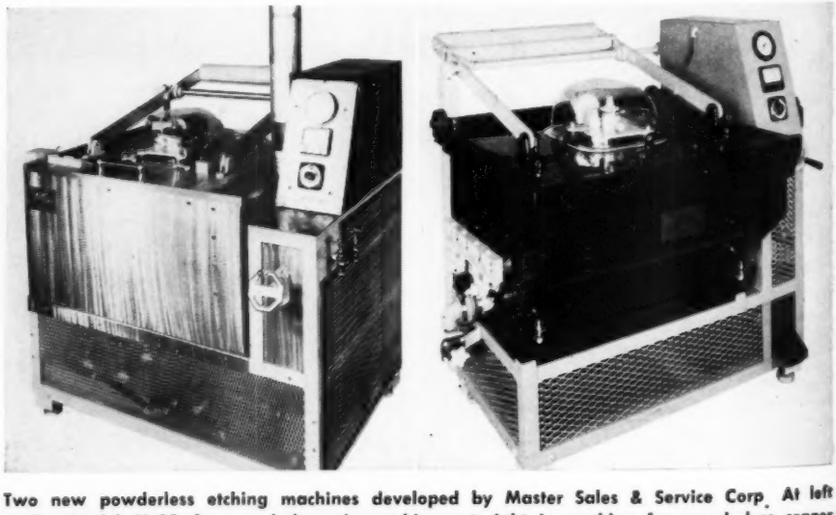
Master Sales & Service Corp. has announced the development of two new powderless etching machines, one smaller in size than previous models. One unit is designed for powderless zinc etching while the other is designed for powderless copper etching.

Model M-32 zinc etching machine has a maximum plate size of 20 in. by 24 in., which is large enough to accommodate the majority of plate sizes produced in the United States. Smaller bath volume (approx. 20 gal.) is said to permit economical use of powderless etching in shops not having a large production volume.

A few main features of the M-32 are: (1) Two complete multi-paddle assemblies which are said to assure more uniform etch quality on maximum flats. (2) Automatic temperature control, said to eliminate variations in etch quality due to effect of temperature change on protective characteristics of film material. (3) Automatic time control which stops unit at pre-set time.

Other features include a stainless steel pump of leak proof design, variable paddle speed control, electrical speed indicator, stainless steel exhaust fan, and a stainless steel cooling coil in etching solution. A lock down starting switch prevents operator from opening machine while it is in operation. Machine is wired for 220 v. single phase, and its dimensions are: Width, 4 ft., 8 in.; depth, 4 ft., 3 in.; height, 4 ft., 9 in.

The powderless copper etching machine is designed specifically for use with chemicals developed by Photoengravers Research, Inc. Like the zinc model, this machine also has a maximum plate size of 20 in. by 24 in. Many features from Master's line of powderless etching machines have been incorporated in the copper machine. According to manufacturer, special plastic finish on machine assures maximum acid resistance. Circle No. 288 on Reader Service Card.



Two new powderless etching machines developed by Master Sales & Service Corp. At left is the Model M-32 for powderless zinc etching; at right is machine for powderless copper etching. Both models have maximum plate size of 20 in. by 24 in.

Checking over final details for the 39th Craftsmen's Convention to be held at Statler-Hilton Hotel, Detroit, Aug. 10-13, is the convention control committee consisting of, left to right, Robert Knox, A. Ted Annen, and John Albert.

Craftsmen Offer Technical Program

Educational meetings dealing with latest advances and techniques in various areas of the Graphic Arts have been planned for the 39th Annual Convention of the Intl. Assoc. of Printing House Craftsmen to be held at Statler Hilton Hotel, Detroit, Aug. 10-13. Planning of the activities is being handled by Detroit Craftsmen under the direction of A. Ted Annen, Shelby Engraving Co., Detroit.

Material to be presented in the series of informative clinics will cover such subjects as letterpress developments, phototypesetting, three-color printing, conversion of type to offset, rubber plate printing, lithography, and relief plates. Each area will be discussed by an individual whose experience and training have enabled him to become well versed on the subject.

Relating the latest techniques and developments in letterpress will be Stanton C. Saunders, vice president in charge of sales, Cottrell Company, Div. Harris-Intertype Corp. Level non-makeready printing by letterpress is the topic of Fred Duensing, sales manager, Vandercook & Sons, Inc. These talks will be delivered at 10:45 a.m. Monday, Aug. 11.

Another educational clinic to be held on Monday, will include an introduction to American Type Founders' Typesetter phototypesetting machine. Speaking for ATF will be John Porter. The clinic, which will get under way at 2 p.m., will also include a discussion of relief printing plates by Floyd C. Larson, Intl. Craftsmen governor, and executive secretary, Intl. Assoc. of Electrotypers & Stereotypers.

Conversion of type to offset without camera repros and stripping will be one of the subjects to be discussed at a clinic to be held Tuesday, Aug. 12, at 10:15 a.m. Stuart Edmonds, Direct Image Offset Corp., will be the speaker. A message emphasizing opportunities for lithographers and engravers will also be given at the clinic by Chesley F. Carlson, Chesley F. Carlson Co.

Printing on aluminum foil will be the topic of a meeting sponsored by Reynolds Metals Co. on Wednesday, Aug. 13, 10:15 a.m. Plant visitations and other clinics are planned for 2 p.m. on Wednesday.

A number of social events have been planned for the convention program including a Sunday night opening party sponsored by the Intl. Printing Supply Salesmen's Guild. The ladies program is under the direction of Mrs. A. Ted Annen, wife of the general chairman.

Registration fees for the convention are: Men, $35; ladies, $20; teen and pre-teen youngsters, $20. Additional information may be obtained from: Kenneth E. Bancroft, convention registration chairman, Detroit Paper Die Cutting Co., 600 E. Woodbridge, Detroit 26, Mich.

Day-Glo Inks Used in Gravure Press Run

Beck Engraving Co., Inc., Philadelphia, sheetfed gravure printers, recently printed a 30,000 four color run using the new Day-Glo gravure inks for two of the colors. The run was printed on No. 1 coated 80 lb. stock on a high speed sheetfed press, which ran at 3000 to 4000 i.p.h. The fluorescent ink was applied in one impression using a 100-line screen. This is claimed to be the largest high speed run of its kind using Day-Glo gravure inks.

Important Conclusions Reached On Apprenticeship Training

Personnel and training directors from 30 Graphic Arts plants met recently at Carnegie Institute of Technology, Pittsburgh, to discuss and plan related educational and training programs for apprentices. Called the Second Annual Invitational Conference of the Education Council, it was held under the leadership of Leslie Shomo, vice president, Education Council of the Graphic Arts Industry. Speakers and panel groups discussed such subjects as in-plant educational programs, correspondence schools, objectives of related technological education, and material which should be included in related educational programs.

A few of the important conclusions which emanated from the discussions were as follows: The printing industry's future manpower must have a broader education in the physical and social sciences before entering employment in the industry. Not every employee in the plant must necessarily be a craftsman since there is already a growing need for technicians at one end as well as operators at the other end, in addition to craftsmen. Correspondence school and evening school programs can be helpful.

Flint to Head Ink Makers

Robert H. Flint, vice president and treasurer, Howard Flint Ink Co., was elected president of the National Assoc. of Printing Ink Makers at its recent convention at Bedford, Pa. Flint recently completed a three year term as president of the National Printing Ink Research Institute, a subsidiary of the association. Other officers elected were James Yates, chairman of the board, Martin Driscoll and Co., vice president, and Matt Leckey, president, Sinclair and Valentine, treasurer. Also elected were the following directors: John S. Thome, representing Sun Chemical Corp.; Robert Gans, representing the Los Angeles Printing Ink Makers Assoc., and R. E. Schwarm, representing the Cincinnati Printing Ink Makers Assoc.

FLINT

Every plant manager responsible for quality of production should know about methods and tools for achieving quality specified by customer. Avoid 'hit and miss' practices; learn an introductory to statistical quality control.

By **WARREN L. RHODES,** *Head, Graphic Arts Research Department Rochester Institute of Technology, Rochester, New York*

Here is Simplified

QUALITY CONTROL

Apply it to operations in any size plant

QUALITY control has become a popular term in the printing world. Like other terms which become popular, it is used by many who do not understand its implications. The printing craft has always been extremely quality-conscious, and the concept of conscientious carefulness has been with us for centuries of printing. The idea of scrupulous concern for quality, then, is not new.

But a new concept is creeping into printing — statistical quality control. This *is* new to the printing industry. It is an approach which seems different to some craftsmen (including foremen, superintendents, and even presidents) and they may reject it on principle.

Because of unfamiliarity it is difficult for this new technique to get a foothold and, like most new ideas, it takes some kind of pressure to get it accepted. In this case the force is brought about by customers who use statistical quality control to evaluate printing which they buy.

A Popular Trend

Another force which is helping statistical quality control (called SQC) to become accepted is its popularity. The machine industries, agriculture, foods, electronics, and many other fields have utilized SQC extensively for many years. SQC is thought to be a part of progressive, successful management.

A lot of the material which has been written about quality control is the result of people joining the movement because of its popularity, without realizing what it is all about. The purpose of this article is to introduce some of the concepts of statistical quality control, and to explain how the techniques may be used. In this way, some printing businesses may also enjoy the benefits which have made other industries enthusiastic about SQC.

The Job of SQC

Statistical quality control is the name given to a group of techniques which are used as aids to management in sharpening decision-making activities. Statistical methods can be used in deciding whether a shipment of materials, such as ink or paper, will perform as expected. They can help a printer to decide whether or not his product will meet the specifications of his customers. The proponents of SQC claim that the methods achieve not only greater uniformity of product but also more efficient production and lower inspection costs.

In this article only one facet of the complex subject of SQC will be discussed. Although this example deals with only one small part of the subject, it emphasizes one of the major aims of SQC—uniformity.

Let us take a simplified, although unrealistic, example to illustrate the concepts of SQC. This illustration deals with the control of color during press operation.

In this example a trademark in one color prints in only one spot on the sheet. The customer, who is very critical, has supplied a printed sample of the color he wants; this represents the specification. He has also supplied light and dark limit samples; these represent specification limits. In other words, he does not want any sheets on which the trademark color is lighter or darker than the limit samples.

This looks like a simple job. The pressman can be instructed to stay within the limits. He will watch the delivery to make sure that the color does not become either too light or too dark. He will have a few

Fig. 1—Quality control chart. Specification for color value, 0.22 (indicated by arrow); dark limit, 0.20; and light limit, 0.24, were determined by measuring samples submitted by customer.

stops and starts during the run, and occasionally he may get into a little trouble. Some of the job may be unacceptable. The customer is a tough one who will likely inspect the job. If he finds too many light or dark sheets, he will not hesitate to reject the job. Therefore, the defective sheets will have to be removed.

Since the pressman knows that the job has a tight tolerance, he will flag the skids wherever there are questionable sheets. The skids will be inspected and the flagged sheets removed with other defective sheets near the markers.

Some question, however, will still remain. Did the pressman flag all questionable sheets? Did he let the ink density on the press go a little high or a little low, but decide to let it pass because it was close and because the foreman was sore about the waste figures that were too high last month?

Maybe the whole shipment should be inspected. This will take time and be expensive, but this is a big customer. Just to be safe, maybe the girls should inspect the entire job. Now there will be no doubt about the shipment—or will there? How about the inspectors? Will they find the defectives? Also, will they throw out only defectives, or will they also reject some good sheets?

Inspection for color variation is a difficult job. Eye fatigue can lead to errors; so can carelessness. When the limits are critical only the most skillful inspector can make accurate judgments and then only under the most favorable viewing conditions.

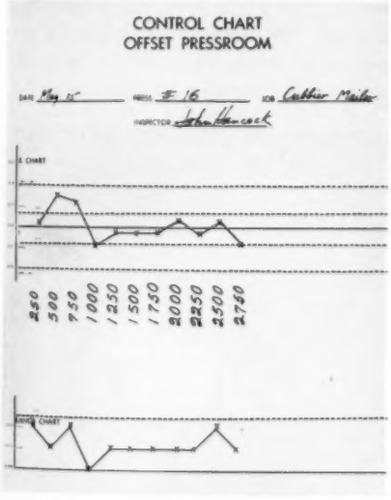


Fig. 3—Quality control chart, the same as Fig. 1, with data from Fig. 2 plotted and with upper control limit (UCL), lower control limit (LCL), and with $\overline{X}$ (0.219) indicated on the chart.

Counter Number	Sheet Number 1	2	3	4	5	$\overline{X}$	R	Comments
250	0.22	0.23	0.22	0.22	0.21	0.220	.02	
500	0.24	0.24	0.23	0.23	0.23	0.234	.01	
750	0.24	0.24	0.23	0.22	0.23	0.232	.02	
1000	0.21	0.21	0.21	0.21	0.21	0.210	.00	
1250	0.22	0.22	0.21	0.21	0.22	0.216	.01	
1500	0.22	0.22	0.22	0.21	0.21	0.216	.01	
1750	0.22	0.22	0.21	0.22	0.21	0.216	.01	
2000	0.22	0.22	0.22	0.22	0.23	0.222	.01	
2250	0.22	0.21	0.21	0.22	0.22	0.216	.01	
2500	0.21	0.22	0.22	0.22	0.23	0.220	.02	
2750	0.21	0.22	0.21	0.21	0.21	0.212	.01	

Fig. 2—Data sheet used to record measurements made with a densitometer on a sample consisting of five consecutive sheets (1, 2, 3, 4, 5) pulled from each 250 sheets in a press run. $\overline{X}$ (Sample Average) = the average of the five sheet values. R (Sample Range) = the largest of the five values minus the smallest.

In solving these problems, two techniques have been found effective:

(1) Judge color by measurement instead of visually.

(2) Put the quality into the product while it is being manufactured.

Many companies have found that a densitometer is a good tool to measure color *during printing*, for comparison with light and dark limits. Stecher-Traung, Rochester, N. Y.; Spaulding-Moss, Boston; and Lord Baltimore Press, Baltimore, Md., are some of the better-known printing firms using densitometers for ink control. Of these, at least one, Spaulding-Moss, is also using statistical methods of quality control in conjunction with densitometer measurement.

This technique requires at least one person other than the pressman to act as quality control inspector. The specification sample and the light and dark limit samples are measured with a densitometer. In this example the specification sample measures 0.22, and the light and dark limits measure 0.20 and 0.24. The quality control inspector then makes a chart like the one shown in Fig. 1. (When plotting control charts for use in the pressroom use large sheets of graph paper ruled five lines to the inch.)

The inspector takes five consecutive sheets each 250 during the run. He measures the trademark color on each of the five sheets and records the data on a record sheet as shown in Fig. 2.

After the five values are recorded, the inspector computes the arithmetic average of the sample ($\overline{X}$) and the range (R). The range is computed by subtracting the smallest of the five values from the largest. These values are entered on the control chart as shown in Fig. 3.

Charts Show Quality Level

The pressman can tell at a glance whether the color is meeting specifications or not. If it is above or below the limits, the pressman makes the appropriate adjustment.

This process is repeated each 250 sheets, or each time the press is stopped, ink added, or other changes made. Following each measurement and computation, the quality control inspector plots points representing $\overline{X}$ and R on the control charts. Whether the pressman flags the skids or not, the defective sheets can be located by referring to the chart. Moreover, the number of sheets above or below the limits can be estimated with fair accuracy.

This makes 100% inspection unnecessary, and it tells the inspector which skids need to be inspected and where to look for defectives. In addition, the control charts provide management with a permanent record of the run and of the performance of the press and operator.

From Fig. 3, for example, (adapted from quality control data obtained from Spaulding-Moss) it is possible to determine which sheets may need to be inspected. Although the averages fall well within the limits, some of the individual sheets may be unacceptable.

Specification Limits and Control Limits

The quality control department can furnish the production department with some other useful information about the relationship between specification limits and control limits. The question may come up, "How close can we hold tol-

FACTORS FOR COMPUTING CONTROL LIMITS

Number of Sheet in Sample	$(\overline{X})$ A_2	D_3	(R) D_4
2	1.880	0	3.267
3	1.023	0	2.575
4	0.729	0	2.282
5	0.577	0	2.115
6	0.483	0	2.004
7	0.419	0.076	1.924
8	0.373	0.136	1.864
9	0.337	0.184	1.816
10	0.308	0.223	1.777

Fig. 4—Control Limits for $\overline{X} = \overline{\overline{X}} \pm A_2 \overline{R}$. Control Limits for $R = D_3 \overline{R}$ and $D_4 \overline{R}$.

erances if we have to?" Perhaps the customer has been asking for closer limits, or perhaps he would give additional contracts to a printer who could deliver a more uniform product. To find out this information the QC inspector computes control limits from the data in Fig. 2.

First, the grand average of all the values is computed $(\overline{X})$ from the data in the table, Fig. 2. Then the average range is computed $(\overline{R})$. Using these data and a set of tables found in quality control manuals, as shown in Fig. 4, he can compute upper control limits (UCL) and lower control limits (LCL).

In this example the number of sheets in the sample is 5. $D_3 = 0$; $D_4 = 2.115$; $A_2 = .577$.

The formula for finding UCL and LCL for $\overline{X}$ chart is: $\overline{\overline{X}} \pm A_2 \overline{R}$. $\overline{\overline{X}}$ is the grand average (0.219); A_2 from the table in Fig. 4 is .577; and $\overline{R}$ is the average range (0.012). UCL = .219 + (.577) (.012) = .226; LCL = .219 − (.577) (.012) = .212.

The corresponding formulas for the range (R) chart are: UCL = $D_4 \overline{R}$ = (2.115)(.012) = .025. LCL = $D_3 \overline{R}$ = (0)(.012) = 0. These are shown as dotted lines in Fig. 3.

These limits (UCL and LCL) mean simply that if the pressman does the best possible job with the materials and equipment he has to work with, almost all of the points will fall within these limits. If points fall outside these limits (for example, sheets 500-700-1000, Fig. 3) then the process is said to be out of control.

When the process is out of control, the pressman should take measures to bring it back in. Conversely, as long as points fall within the control limits, no adjustments should be made. If he follows these two simple rules, the operator can achieve the best possible uniformity.

There is, of course, a relationship between the control limits and the light and dark limits established from the samples supplied by the customer. To determine this relationship, compute $X \pm A_2 \overline{R} \sqrt{N}$ (N = sample size, in this case 5). The results are: 0.219 + (.577) (.012)(2.24) = .235; and 0.219 − (.577)(0.12)(2.24) = .203.

If these values are equal to the specification limits then as long as the process is in control the product will meet specifications. If the specification limits lie inside these computed values, then it will be impossible to satisfy the customer without extensive inspection and sorting. Usually, as in this example, the specification limits are outside the computed values. This is a happy situation because the process can go a little out of control before exceeding the light and dark limits.

Benefits of Quality Control

These, then, are the benefits of this SQC technique: Reduced inspection, less waste, assurance of quality, greater uniformity, more realistic information about the relationship between specification limits and production capability, and a permanent record of performance. This permanent, factual record can be used in discussing the job with the customer; it can be referred to if the job is re-run in the future; or it can be used to evaluate press and operator.

This example is a greatly simplified version of one of the techniques of statistical quality control. Many considerations which are important to this example have been omitted, or touched upon only lightly, in the interests of simplicity.

Other SQC techniques such as control by attributes, sampling, inspection, and operations research are equally effective as management tools to be used to increase efficiency, reduce waste, and improve uniformity. Every modern manager who has responsibility in these areas needs to know about these tools and how to use them effectively in his operations.

Handling Simplified by Overhead Conveyor

Materials handling at Tech-Graphic, Inc., Burbank, Calif., has been simplified through the use of an overhead conveyor system manufactured by Chainveyor Corporation. Tech-Graphic, engaged in marking electronic instruments by silk screening, utilizes the conveyor to transport printed work from the inspection station through an infra-red drying oven to the wrapping table in the shipping department. The system is suspended from the ceiling, thereby eliminating floor supports. The conveyor climbs and dips sharply and is said to be capable of negotiating 16 in. radius curves.

Wiretyer in New Location

Wiretyer Corporation has moved its offices and factory to a new location at 65 Leliarts Lane, East Paterson, N. J., it was announced recently. The move was made to enable an expansion of engineering and manufacturing facilities.

Chainveyor conveyor system routed along production line in screen printing department of Tech-Graphic, Inc., Burbank, Calif. System conveys work from printing operation, through an oven, and to shipping.

Cadets Tour Printing Plant—A group of 30 cadets from the U. S. Military Academy at West Point recently toured Charles Francis Press, New York, N. Y. to obtain information on printing as a form of communication media. Explaining the operation of a color rotary press to part of the group is Arthur R. Straus of the firm's production department.

News Magazine Dubs Printing as 'Ancient' Industry, but Sees Changes

AFTER 80 years of comparatively little progress, the printing industry is on the verge of vast changes that will affect the lives of millions of people in every part of the country, said *U. S. News & World Report* in a special report on printing in its June 13 issue. It is an ancient industry now, said the writer of the report, but he predicted newspapers, magazines, all kinds of printed material are to be affected by a changeover from traditional practices to new methods. New jobs are being created, new skills developed, and new machinery put to work.

Out of these changes may come reduced costs of printed products, the article continued. Magazines and newspapers are expected to use more color and they will be easier to read and more quickly produced. It was also stated that there may be an increase in the number of newspapers in the United States. Even with the spurt in population, the trend in this field recently has been downward.

Metal Type Doomed?

U. S. News & World Report quoted one industry spokesman as saying, printing and its allied crafts have "made more progress in the first six years of the second half of this century than we made in the previous 50 years." According to the report, some printers say flatly that metal type, basic tool of the industry for hundreds of years, is doomed to disappear, a victim of cheaper, faster, better printing methods. Others, while conceding that great strides are being made, argue that changes in the industry will be evolutionary, not revolutionary, and that metal type still has a long life expectancy.

Despite its size (ninth among all industries), the printing industry is made up of a large number of small establishments. It was pointed out that more than 90% of the companies in the industry have fewer than 50 employees. Because of the neighborhood nature of printing, growth in some of its branches has not kept pace, up till now, with new inventions and processes, said the author of the report. But, he added, industry leaders believe that now, with impetus provided by a few large companies and encouragement from research and development groups within the industry, the great changes predicted will occur within the next few years.

As stated in the article, the tightly knit group of labor unions in the printing industry also is showing signs of easing resistance to new methods. Widespread unemployment, union officials have found, does not necessarily follow the introduction of labor saving devices. On the contrary, new jobs often are created and new business generated.

The growing popularity of phototypesetting was cited as being at the heart of the change over in printing practices. It was brought out that three factors have held back the use of photography in printing until recently. One was its limited versatility when special type faces were required. Another was its lack of flexibility when many corrections were indicated. These obstacles are being overcome.

The most serious drawback in some types of printing with film has been, and remains, cost. Film is not reusable as are metals. Sponsors of phototypesetting are hopeful that cheaper ways can be found to turn out the kind of film needed, continued the author.

Also discussed in the report was the Du Pont plastic printing plate, which is now being tested in printing and newspaper plants in various parts of the country. Large scale production is not planned until late 1960.

Advantages claimed by Du Pont scientists for the new plate which were mentioned in the article are: It will reduce the time needed to prepare most material for printing; will make the printed word easier to read; will eliminate one or more steps in various types of printing, and will be longer wearing than a metal plate. At first, plastic plate is expected to cost slightly more than a metal one. Widespread acceptance by the industry, however, probably would bring down the costs, its developers say.

Mixed Reactions to Plate

Industry and union leaders are following tests of the Du Pont plate with a mixture of enthusiasm and skepticism, said *U. S. News & World Report*. Previous efforts to replace metals with other materials in the printing industry have usually left much to be desired, it was added.

According to the article, Dr. W. H. Vinton of Du Pont's photo products department, predicts that the first general use of plastic plates probably will be in preparing full page newspaper ads for the presses. Scouting trials, he feels, indicate that the plate will perform adequately under the rigorous conditions of direct newspaper printing.

Dr. Vinton also foresees the possibility of new newspapers springing up in communities where there are none, or only one, and in weekly newspapers being converted to daily publication. This could come about, he says, through lowered costs of new, lightweight equipment, such as presses, and a reduction in the labor force required.

Artist's sketch depicts the modern design of plant of M. G. Lewis Printing Co., Jacksonville, Fla.

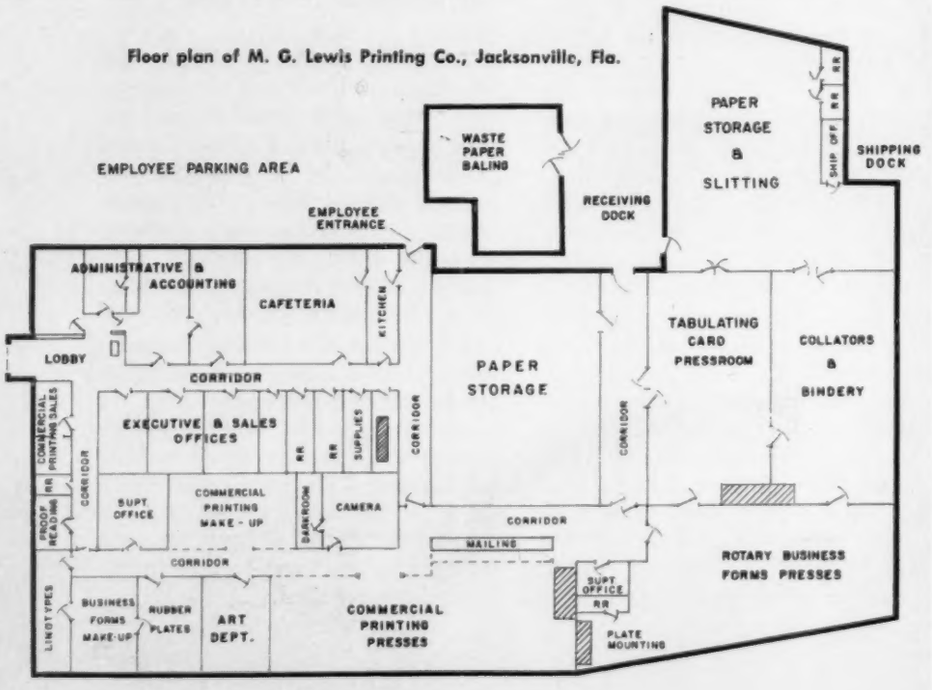
Two Modern Printing Plants Reflect Industry's Growth

REFLECTING the trend toward expansion and modernization in the printing industry are the plants of M. G. Lewis Printing Co., Jacksonville, Fla., and the Printing Division of Marine Trust Co., Buffalo, N. Y. Both plants feature modern equipment and smooth production flow, two important requirements in coping with increased demands for more printing production in a shorter period of time.

LEWIS PRINTING CO.

The M. G. Lewis plant occupies an entire city block in Jacksonville, Fla. About three-fourths of the area is utilized by the plant and office buildings and the remainder of the space is devoted to employee parking. The entire plant is of one-story construction with the exception of the paper storage area, which is 1½ stories.

Floor plan of M. G. Lewis Printing Co., Jacksonville, Fla.



A recent addition to the plant is the office area shown in the upper left portion of the floor plan below. The 65 ft. by 103 ft. addition is of concrete block construction and features a roman brick entrance. The windowless, air conditioned new addition is connected to the plant by two corridors.

A cafeteria has a seating capacity of 50 and includes complete kitchen facilities.

Several air conditioning units, designated by diagonal lines in the floor plan, provide temperature and humidity control throughout the plant.

Three Product Divisions

Lewis has three product divisions including carbon interleaved business forms, commercial printing, and business machine tabulating cards. Each division has its own pressroom which comprises an independent unit, free from interruption by other divisions.

The business forms section is equipped with Hamilton, Dutro and New Era rollfed rotary presses. Rubber and litho plates are used in printing business forms.

An interesting feature is the number of corridors spaced throughout the plant. Materials and supplies being transported to a certain section of the plant do not have to pass through and/or interfere with operations in other departments.

Also of interest is the use of a

separate building for waste paper baling operations.

Lewis employs about 90 people working on various shifts. Some departments operate on a one-shift basis, while others operate on two or three shifts.

The firm has sales offices in Miami, Winter Haven and Jacksonville, Fla.; Atlanta and Macon, Ga.; Washington, D. C., and New York, N. Y. President of the company, which was founded in 1934, is M. G. Lewis.

PRINTING DIV., MARINE TRUST CO.

The well-equipped printing division of Marine Trust Co. is located in the basement level of a recently constructed eight level building located in downtown Buffalo, N. Y.

Fluorescent lighting throughout the plant provides ample illumination of all work areas. Complete air conditioning adds further to the comfort and working conditions of the employees.

The illustrations at right reflect the good housekeeping which is prevalent throughout the plant. Machinery is kept in good running condition by regular cleaning. The vinyl tile floor is cleaned daily and waxed weekly.

All of the printing of confidential nature as well as certain other forms used by the 160 offices of the 13 Marine Midland Banks is printed in the private plant. The Marine Trust management states it has no intention of competing with commercial printing firms. Subsequent runs of many of the forms originally designed and printed at Midland are contracted to local printers. A large volume of advertising material is also awarded to commercial plants.

The plant is equipped to produce both letterpress and offset printing. Offset equipment consists of one Harris, one ATF Chief, and two Multiliths. Equipment in the letterpress area includes four Miehle V-50 Verticals, one Heidelberg, two Craftsman automatic platen presses, two Chandler & Price handfed presses, and two check imprinting presses.

Xerox equipment is used to produce daily, weekly and monthly reports on short notice.

A unique feature of the plant is that about 1000 orders for imprinted checks are received daily and about 400,000 check books are produced each year.

In charge of operations at the plant, employing 28 people, is Albert L. Kolb, assistant vice president and manager, and vice president, International Craftsmen's Assoc.

Dexter Paster Attachment Simplifies Difficult Fold

An economical method of folding four-page inserts with foldouts on each side of the center spread has been reported by the Dexter Company, Div. Miehle-Goss-Dexter, Inc.

A problem job for a 9½ in. by 12½ in. magazine was solved as follows: The printed insert, 18½ in. by 25½ in., was folded parallel to the 25½ in. dimension on the first station of a Cleveland MS folder, just enough off center to leave a ¾ in. overlap. Upon leaving the first station, the folded sheet was perforated across center at right angles to the fold. At the second fold station, paste was applied to the lap edge, the sheet folded at the perforation, the pasted edges rolled together, and the eight-page folder discharged on the delivery table.

The insert was then gathered with the other signatures so that the pasted edge was bound into the magazine. With the perforated edge cut away in the trimming of the magazine, an eight-page insert with double foldouts resulted.

Scenes in Printing Division of Marine Trust Co.

TOP: Section of letterpress area showing platen press equipment. Ample work space and good housekeping are evidenced.

CENTER: A view of Miehle Vertical section with offset equipment visible in rear. Fluorescent lighting provides good illumination in this area and the rest of plant as well.

BOTTOM: Over-all view of plant showing extent of facilities.

In the plant of Schneider Press, New York, N. Y., a press sheet is checked by, left to right, Stripper Dom Cerato, Asst. Supt. J. Nagele and Plant Supt. Al Kulka.

WHAT ABOUT OPERATIONS INVOLVED IN

Lithographic Stripping?

By ADAM HENRI REISER, *Eastern Editor*

TRULY, it can be said that lithography is the sum of many parts. Inspection of the finished lithographic piece very often will hide the many steps necessary to its production.

Of course, this is peculiar to many things encountered in our daily existence from the five minute acrobatic act to the simplest item of apparel, food or equipment we use. Many steps and sometimes many hands require tedious hours of preparation in their production.

Probably nowhere in the lithographic process is this more true than in the stripping operation. Just what is meant by the term—stripping?

Definitions of Stripping

Stripping is defined in the dictionary as—the act of taking away, or depriving—the act of undressing. In lithography, the term may have had it derivation from the early practice of soaking and peeling the photographic wetplate membrane from its glass base. In effect, stripping the film from the glass base and then reassembling it on another piece of glass in a different combination. The job was thus pieced together, or assembled, or stripped-up on the glass.

The stripping operation broadly covers the positioning of the negative or positive over the area of a sheet so the finished product is laid out correctly on the paper on which it is to be printed. However, stripping really embodies many skills. It may be for that reason, supervisory personnel is often chosen from that field or branch.

Hub of the Preparatory Wheel

Probably nowhere in any of the lithographic operations is there so much evidence of the claim of the industrial engineer of "the one best way of doing the one best thing" as there is in the stripping operation. There are so many ways presented the stripper in which to prepare the work for the press plate, each being correct procedure at some given time. Sometimes where work becomes diversified, the ways of its production increase in number. Methods used in stripping are almost as numerous as the types of work entering a plant. Even in the simplest form, for the smallest press plate, stripping can be complex.

However, plant procedure must be taken into consideration. For illustration, while deep-etch plates are essentially long run plates, some plants use nothing but deep-etch. Regardless of length of run or quality desired, every job in that plant is produced by the deep-etch method. Workers are thus able to turn out a high quality job on every order, for the deep-etch lithographic plate is recognized for its high quality.

Further, by the employment of mass production techniques, plant procedure comes closer to mechanical, repeating given actions almost automatically. All units of the production chain know exactly what to look for in every job rather than be part of a mixed up operation, not knowing whether the job will be produced albumen or deep-etch—surface reversal or straight flat negative.

History of the Job

Some historic background may provide an insight into the role of the stripper. Originally, when work was engraved or hand drawn on stone and later on metal, the hand transfer worker pulled the impressions, assembled them, positioned them on a layout sheet, and then pulled them over on a larger stone or plate for use in the press.

With the introduction of photolithography and the breakdown of operations in the mass production technique, the person who now made the original, the negative or positive on film, photographing this from the copy, was the cameraman. The artist or opaquer corrects it and makes it ready for the next operation. In this, the stripper positions the film on the flat or layout, combining films in their proper position,

size and number for the press plate. The artist or opaquer may then eliminate or reduce further unwanted areas after this stage of the work. The platemaker or the photocomposing machine operator, exposes the press plate under the flat making the plate ready for the press.

Duties of the Stripper

From the above it can be seen that the hand transfering operation has been broken down into three parts, stripping being one of them. A broad analysis of stripping, shows the stripper performs the following operations: (1)—Reads and receives instructions about the job. (2)—Checks films, copies and roughs against instructions. (3)—Translates the instructions into a layout. (4)—Checks layout against instructions, films, copies, etc. (5)—Sets in motion production of supplementary film that may be needed in stripping the job. (6)—Positions films and marks where indicated on the layout. (7)—Carefully checks stripped-up job against instructions and copies. (8)—Opaques and masks for breakup, or proofs if needed. (9)—Gives the flat a final check before it goes to platemaker.

Examination of the above reveals that checking is very important. Too much emphasis cannot be placed on this factor of the operation. Checking is one of the important ways of averting many of the pitfalls in the preparatory stages. This applies to all steps but it is particularly important here, for once the plate is made and goes to the press, much wasted time can ensue from an error that crept in at the stripping operation.

Backing the checking up with proofs, either blue prints, van dykes, ozaliths or chromelines, in fact any kind of proof taken during the preliminary stages, is good insurance. Submitting those to the customer will often make him aware of the difference between his conception of the job and the way it may actually come out. A final checking of the press sheet is also excellent procedure.

Examination of the listing again will reveal that instructions are important, too. Lack of proper instructions can be costly for instructions are to the stripper what blueprints are to the builder. Of all the help given the stripper, that of correct information probably can be the greatest.

Job information is dispensed throughout the plant via the job envelope. In case of voluminous instructions, each department may get a separate job sheet for its specific use. General information may be contained on the envelope with the supplementary instructions under department headings.

The organization having an efficient system of communication will get this pertinent information to each of the production departments. This will go far toward providing a minimum interruption of time due to questions on any phase of the operation.

Role of Production Office

Where does this information emanate? It must come from the point of origin of the job—the office where estimators, production head and department heads confer on the job. The findings are then transmitted to the job envelope. The size of this envelope is determined by the type of work flowing through the plant and the method employed in getting instructions to production personnel.

This much is certain. The plant with the most effective communication system removes much of the guesswork in production of the job.

Three things are necessary for the stripper to ply his craft: (1) He needs physical equipment such as stripping table, squares and rulers, and/or lineup table, room in which to work with extra benches for tools, flats, film and copies. (2) He needs material such as goldenrod paper, tapes, opaque, cellophane, plastic, and film. (3) He needs information on the job.

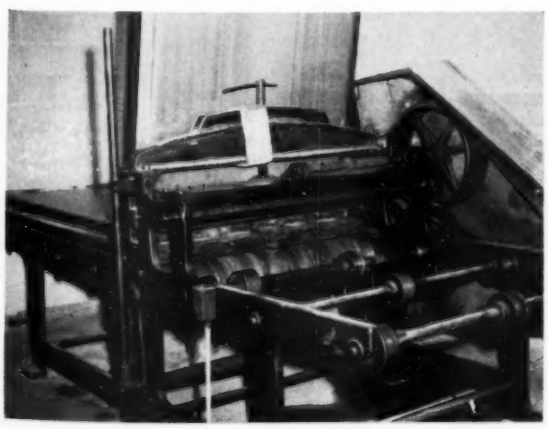
Material Used by Strippers

The latter item has been discussed. The first item we assume is available. Now we examine the second, material. A basic material used daily for layouts and masking is goldenrod paper. The layout, a kind of a plan or working design of a job, is customarily drawn on goldenrod paper. The layout is drawn to show the cutting size of the job, the margins, and an indication where the film is to be positioned. This enables the stripper to properly place the work on the sheet and supplies sufficient indication for the pressman to get his lay.

These layouts may be drawn separately for each tailor-made job. Where repeats occur, having the same unit and stock size, a quantity of the master ruled forms may be run off on the press.

Goldenrod paper holds back light from the plate coating in platemaking. It is therefore cut away from those sections where the work is to appear on the press sheet. Negatives positioned in their proper place on the layout are fastened onto the goldenrod with cellophane tape. This stripped-up work is then called a flat. To insure proper contact when making the exposure to the pressplate, and also to permit cutting away the goldenrod without damaging the emulsion of the negative, the latter is fastened, emulsion side uppermost. The work should appear unreadable when the flat is viewed as the stripper fastens the negative to the goldenrod sheet. When the flat is turned over to cut away the goldenrod, the work which will then be exposed should read properly. In common practice such a flat is exposed to an albumen coated plate and is therefore said to be for albumen.

(*Continued on Page 69*)



An old lithographic transfer pulling over press used to pull the hand transfer over on the press plate.

Color Separation by Electronics

By RICHARD L. SMITH, *Staff Writer*

THREE- or four-color continuous tone, color corrected separation negatives or positives can now be produced from colored transparent or opaque copy in less than 1½ hrs. on an electronic color separation machine developed by Acme Telectronix Div. NEA Service, Inc., Cleveland.

Research and experimental work over a period of more than 17 years went into the development of the Acme Color Separator. An article appearing in the October 1954 issue of *Printing Equipment Engineer* provided a complete description of the machine and its operation. Since then, however, a number of important and advantageous changes have been made in the separator.

The earlier machine was designed as one compact unit, with all control dials and switches built into the same cabinet in which the scanning mechanism was built. This design resulted in a complexity of controls and wiring which required ventilating units to dissipate the heat created.

Acme's new model consists of two separate cabinets — the scanning unit and control unit. The present design eliminates the use of a cooling system and also facilitates operation of the machine. All controls are directly in front of the operator and within easy reach. The earlier design required the operator to shift back and forth in front of the machine while making adjustments. The control unit is on casters, enabling the operator to move it to any desired position.

Improves Scanning Device

Another improvement in the scanner is found in the scanning device. Formerly situated behind the scanning drum, the device is now raised approx. 45 deg., thus enabling the operator to get a better view of the area being scanned by the pin point scanning aperture. This feature facilitates tuning in highlight and shadow areas, or black and white areas as they are referred to by Acme.

The versatility of the machine has been increased by the fact that it is now capable of scanning opaque or reflection copy as well as the transparent copy it was originally designed to use. A larger light source has also been introduced in the scanner.

Now that the improvements in the Acme Color Separator have been mentioned it seems advisable that a description of the machine's functions and operations should be given. Since the mechanics of the machine are, in essence, identical to the earlier model, the descriptive matter will also serve as a review to those who have read the original article.

Time Savings Are Noteworthy

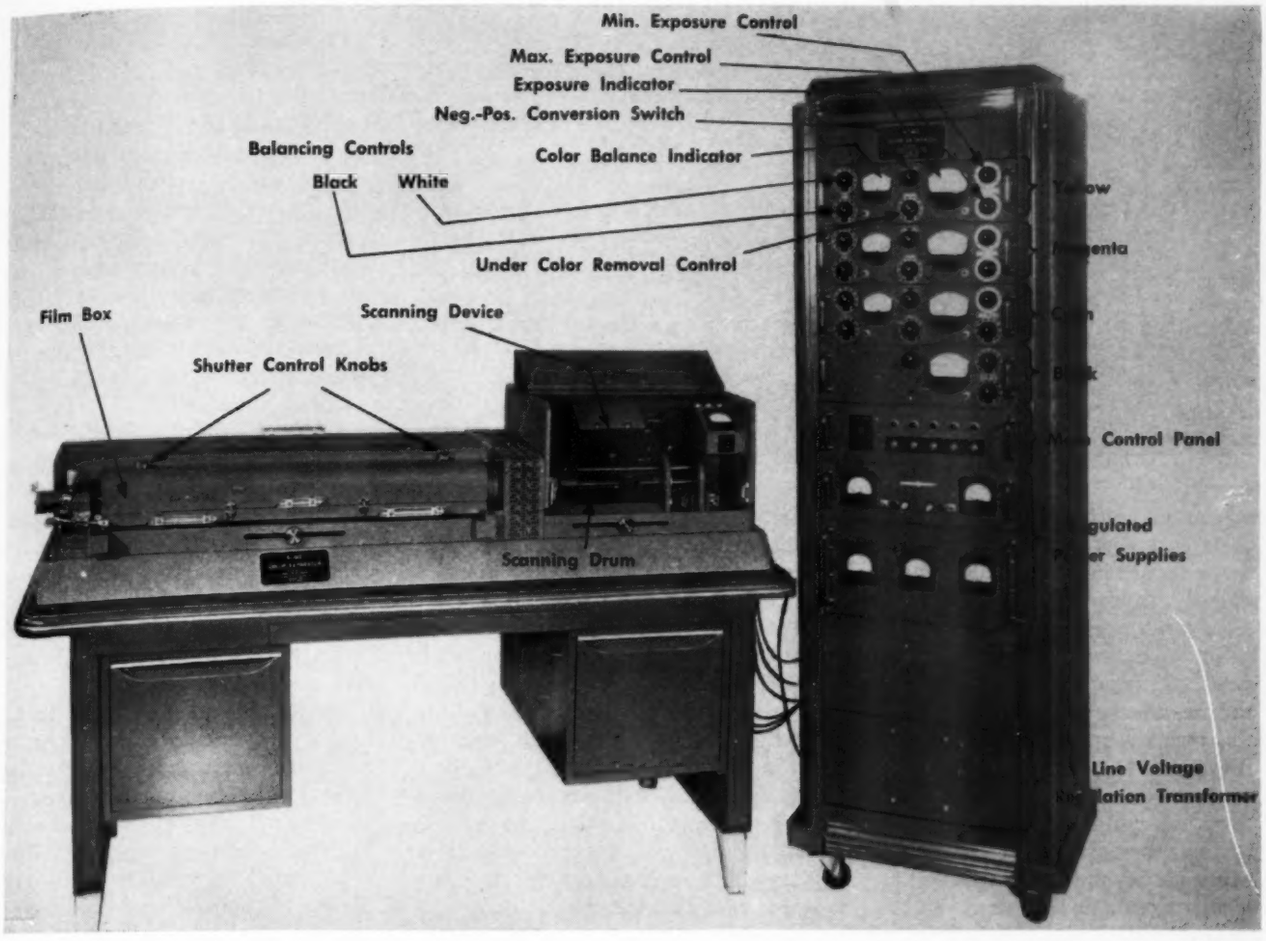
The complete operation, from the moment the operator receives the artwork or transparency to the complete set of three- or four-color continuous tone, color corrected separations, requires less than 1½ hrs. This is a considerable saving of time over conventional camera methods.

The machine is capable of scanning copy in sizes up to 8 in. by 10 in. The copy may consist of any positive transparencies such as Kodachrome, Ektachrome, or Anscochrome, as well as opaque copy such as artwork or dye transfer prints. Color prints are also usable on the scanner.

The scanning unit consists of a camera-like box in which three light sensitive electronic photo cells are located, one for each of the primary colors. The light sensitive surface of each tube is covered by a standard Wratten color filter, namely: Red 29; Green 61; Blue 47B. Light entering a main lens in the front of the optical unit is broken into its respective components by the filters. The light is converted to electric impulses which are corrected by the electronic computer and then transmitted to the recording units.

The recorders are four exposure lamps, one for each of the separations, which receive electronic impulses from the electronic section and convert these impulses into light rays which fall upon and expose the film emulsion. Since color separation is taken care of in the scanning unit, the exposure lamps treat the impulses as if they came from black and white copy, and the respective films are subsequently exposed as black and varying shades of gray.

One may wonder how the black separation film is created, since there is no apparent allowance made for it in the scanning system. The exposure lamp for the black film relies on information received from the electronic computer. This device automatically computes the amount of black which should be laid down in any one spot to furnish the proper amount of neutral density to supplement the colors



The newly-designed Acme Color Separator for producing three- or four-color continuous tone separation negatives or positives from transparent or opaque copy in less than 1½ hrs. Scanner breaks up original picture into lines and simultaneously divides each line into tiny blocks which are viewed by photoelectric cells and filters. An electronic computer analyzes each tiny element of the picture, measures the amount of each color in each spot, computes the amount of correction to be applied to each color, and passes the information along to recording lamps which lay down on each separation film the proper amount of density representing each color. Control unit (right) is adjusted in accordance with copy characteristics and camera requirements. Scanning unit (left) follows instructions provided by control unit and produces color corrected separations accordingly.

printed at that spot. The strength of the black plate can be varied by the operator to meet local ink, paper and printing conditions. The black plate can range from a full black plate, carrying virtually all of the neutral density, to a ghost black plate used mainly for emphasis, with the neutral density being laid down by the colors.

Illumination in the machine is accomplished in either of two ways depending upon the nature of the copy. The scanning drum is a glass cylinder to which the copy is attached. If a transparency is to be scanned, a switch on the control panel illuminates a bulb, of approx. 10 w., inside the cylinder. Light is then transmitted through the drum and the transparency into the scanning lens.

If opaque or reflective copy is used, a control panel switch illuminates four bulbs mounted on the optical unit. The bulbs, whose total wattage is approximately equal to that of the one bulb in the scanning drum, are mounted in such a manner as to eliminate shadows caused by light falling on the uneven surfaces of some types of artwork.

Color Scanning Speeds

Color scanning is accomplished at 250 lines per in., working from right to left, with a scanning drum speed of 60 r.p.m. Therefore, with each revolution of the drum, the scanner advances 1/250 in. to the left. The scanning unit spends only 1/2700th of a second at any given point on the copy.

Since the recording drum is geared to the scanning drum, it also rotates at 60 r.p.m. The lateral movement of the recorders, however, is reduced to 275 lines per in. The reason for this reduction is to allow register marks to be affixed to a maximum 8 in. by 10 in. piece of copy, increasing the dimensions slightly, and still permit recording of this copy together with register marks on a maximum piece of 8 in. by 10 in. film. This reduction is very slight, however, and for all practical purposes the ratio between original and separation is 1:1.

If you are puzzled as to how a scanning machine that makes negatives from positive copy can make positives from the same copy, the simplest explanation that can be offered is that positives are made through an electronic reversal process, controlled by a switch on the machine. As a result, the recorders function just the opposite from the way in which they do for negatives.

To briefly explain the operating procedures involved with the Acme Color Scanner, imagine that we are

West Coast Heidelberg Installation — Printing by Heath, a Seattle, Wash. plant, recently purchased a new 15 in. by 20½ in. Original Heidelberg cylinder letterpress. Shown, left to right, are Clem Heath, owner; Wayne Fowers, Heidelberg sales representative; Mrs. Howard Heath, and Howard Heath, owner.

presented with an 8 in. by 10 in. color transparency and desire to make separations to be used subsequently to produce a set of four-color letterpress plates.

Since letterpress plates require screened negatives, we will switch the negative-positive control dial to the positive position, because when the positive transparencies are screened on the camera, the desired negatives will result.

Register marks are affixed to the transparency and the transparency is then wrapped around and attached to the scanning drum. In this case, the source of illumination will be the bulb inside the drum. The whitest or least dense area in the copy is placed directly under the scanning lens and the balancing control dial for white (shown in illustration) is adjusted so that the color balance indicator is at mid-scale. This is done with all three of the color indicator scales while the scanning lens is over the same white area.

Next, the scanning unit is positioned directly over the blackest or most dense area on the transparency. The procedure then follows that for the white with the difference being that the black balancing control knobs are used.

The effect of these adjustments is to balance the machine electronically to correspond with the two extremes in the copy.

Removing Unwanted Color

If the pigments used in printing inks and the dyes used in color film were identical, most of our work would be done at this point. It would only be necessary to lay down on the separation films and later on a printing plate the exact amount of color which has been measured in the original film. Unfortunately, it is not that simple, since in a green spot, for instance, there is probably too much red; in flesh tones, too much blue; in blue skies, too much yellow, etc. These unwanted colors must be taken out, and in precisely the right amount. In a black spot on the color film, the machine will measure about equal amounts of all three colors, but in most printing processes it is impossible or undesirable to print saturated amounts of all colors to get black.

It can be noted in the illustration, that directly below the negative-positive conversion switch, an under color removal control knob is located. This control, located on each of the primary color panels, is used to control the percentage of each specific color necessary to produce a good black. These controls are adjusted in accordance with the type of ink and stock used.

Various percentages of each color are required under varying paper and ink conditions. The machine can be set to produce exactly the percentages desired for each color. In a standard photographic process, these percentages must be achieved by the use of masks.

The Exposure Operation

The next set of adjustments involves the minimum and maximum exposure controls located at the extreme right of the control unit. Information for setting these controls is based upon the density range desired by the engraving camera operator. These controls need not be adjusted for every set of separations, since a given plant will have a particular density range in which most of its photographic work falls.

The light tight removable film box is taken to the darkroom where it is loaded with four sheets of film, one for each of the recorders. The box is then restored to its position on the scanner and the shutter control knobs released to permit recorders to transmit light to the film. The narrow shutter extends the full width of the film box. After positioning the scanning unit in its extreme right position, the scanning mechanism cover is closed and the machine is started.

After approx. 30 min. have elapsed for the 8 in. by 10 in. copy, the machine is stopped, and the film box is removed to the darkroom where the separations are chemically processed according to recommended procedures.

A complete set of simultaneously produced, color corrected, continuous tone positives, ready to be screened are thus produced in 1½ hrs. The screened separations require little hand work and eliminate most of the hand staging and re-etching required on engraved plates under conventional methods. If we had desired negatives from the copy, setting the control knob to the negative position would have been the only difference in procedure.

From the material presented it can be seen that the Acme Color Separator offers a great latitude of adjustment to accommodate various types of printing, paper, inks, and plant conditions.

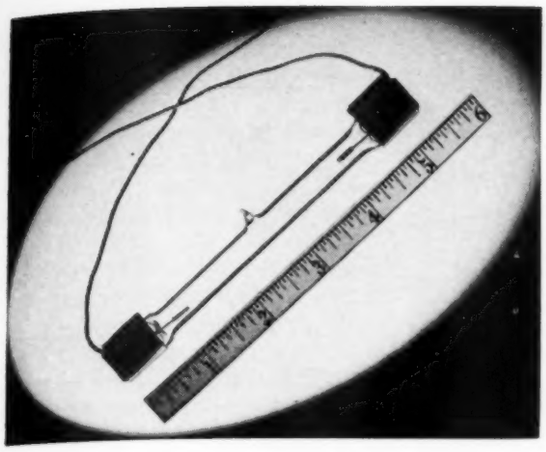
Training the Operator

The Acme Color Separator is, in essence, a tool for the use of a skilled technician, a person thoroughly versed in color photomechanical operations and techniques. The machine facilitates the work of the technician by enabling him to produce more accurate and more consistent results in a shorter length of time.

Training of scanner personnel consists of a two week course at the Acme Telectronix plant in Cleveland, as well as additional training at the point of installation.

The first commercial installation of the Acme Color Separator has been made at Niagara Photoengraving Co., Buffalo, N. Y., subsidiary of the Buffalo *Courier-Express*.

Further information may be obtained by circling No. 285 on Reader Service Card.



Substantial savings for the printing industry are predicted by General Electric Co. from its newly-developed Pulsed Xeonon arc lamp designed for use in platemaking. Applications include burning in lithographic plates, color separation work, and copyboard work. Pictured here are smallest of four sizes available. Lighted lengths range from 3 to 36 in.

New Light Source for Printing Industry

A new light source designed primarily for the printing industry has been developed by General Electric Co. Called the Pulsed Xeonon arc lamp, it is a tubular quartz lamp which may be used to expose slow-speed photo sensitive materials.

G-E claims the PXA lamp does an outstanding job of burning in lithographic plates, is ideal for color separation work, and does a complete range of copyboard work.

The PXA lamp operates with a radar-like pulsing effect, flashing on and off 120 times a sec. Less than a half-inch in diameter, the new light source comes in lighted lengths of 3, 12, 24 and 36 in.

Simultaneously, American Speedlight Corp. announced a line of lighting equipment designed primarily for the Graphic Arts industry. Called the Ascorlux, the equipment is the first to incorporate the new G-E PXA lamp.

The new lighting system consists of a gas discharge lamp of high brightness and a ballast permitting extremely rapid flashing, so rapid that, to the eye, its light is continuous. It has the following characteristics: (1) It can be turned on and off for each exposure with no warm-up time, making it highly convenient. (2) A color temperature that is effective with photo sensitive materials. (3) High wattage concentration (a highly concentrated light source). (4) Adaptable to highly efficient reflectors.

G-E engineers said power savings and increased output will result because of the short exposure times required by the PXA lamp in highly effective lighting units. Additional savings will be realized in air conditioning and maintenance costs due to the fact the lamp burns a shorter time for exposures and produces less heat.

A main advantage of a gas discharge lamp like the PXA in the applications mentioned is its color distribution or color quality, G-E engineers said. In those applications, a desirable light source is one which increases the near ultra-violet and blue output. This is because most photo sensitive and photo chemical emulsions are sensitive to this energy, it was explained.

In operation, the PXA burns with a white intensity which seems continuous. Actually, it flashes 120 times a sec. but because of its short flash duration (one thousandth of a second) the lamp is, in fact, off more than it's on. The lamp is filled with Xenon, a rare gas which has the ability to produce brilliant light when electric current is passed through it.

Under typical operating conditions, the average PXA life is 50 hrs. The lamp receives pulses of current from its ballast system, a pulse for each half cycle of the line frequency, or 120 per sec. on a 60 cycle line. It contains no moving parts or electronic tubes. Circle No. 286 on Reader Service Card.

ANPA Moves New York Office

The New York, N. Y. office of American Newspaper Publishers Assoc. has moved to a new location at 750 Third Ave., it was announced recently. The new telephone number is YUkon 6-8200.

Wood Newspaper Contracts with Two German Firms

Contracts were recently completed between Wood Newspaper Machinery Corp. and two German firms, one a publisher and the other a manufacturer of presses and allied equipment.

Axel Springer & Sohn, Hamburg, Germany, publisher of six newspapers with a combined circulation of 5½ million and two magazines with over 3 million readers, has purchased several press units from Wood. The first units for the order are being built at the Wood plant in Plainfield, N. J.

The second contract appoints Albert & Cie, Frankenthal, Germany, as Wood representative for manufacture and sale of Wood presses and equipment in the Eastern hemisphere. One of Germany's largest press manufacturers, Albert & Cie will build future Wood presses for Axel Springer & Sohn.

Adam Cook's Sons Observes 90th Year of Operation

One of the oldest manufacturers of lubricating greases in the country, Adam Cook's Sons, Inc., is now in its 90th year of operation. The firm was founded in 1868. Heading the firm are Alfred R. Lange, chairman of the board, treasurer, and general sales manager, and Frank P. Gill, president.

National Saftey Council Award—Donald G. Borg, left, editor and publisher of the Bergen *Evening Record*, Hackensack, N. J., accepted the 1957 Public Interest Award of the National Safety Council from Isaac Bendow, president of the Bergen County Safety Council. Bendow is also president of Star Parts, Inc. The award is made annually to public information media for safety practices.

Survey Shows Tolerances In 133 Job Composing Rooms

INFORMATION of basic value to the country's printing plants for improvement of their composing room practices is contained in the report of the Research and Engineering Council's Type High Task Force. The report is based on a survey of 133 shops operating 967 line casting machines. While facts and figures showed a wide variance on an overall basis, effective control was demonstrated in the better shops where close type high tolerances were maintained. Their practices serve as a foundation for further improvement.

Valuable Service

Surveys such as this provide interesting and valuable material to bring about standardization and higher quality products. It is through this sharing of knowledge and experience that the Graphic Arts field has made its steady advance to better methods and greater efficiency.

The Type High Task Force carried out its project under the leadership of W. C. Hagan of the Kingsport (Tenn.) Press, Inc. Other members of the committee were Emanuel Sarfaty of Intertype Company and E. A. Scordato of Mergenthaler Linotype Co.

The survey not only covered type high tolerances but the various factors involved in their control, including measuring devices, corrective methods, and the care and use of slug machines.

Mold Insulators

A total of 101 shops of the 133 contacted said they applied a chemical to the back mold wiper to prevent accumulation of metal on the back of the mold. Some 37 different metal insulators or deoxidants were mentioned in use in the various shops.

Most of the shops reporting said they measured deviations from the standard dimension with a standard hand micrometer. Some 99 of the shops reported such use. A total of 13 others employed the Hacker type high gauge, and 17 used the Hacker gauge with the standard hand micrometer in combination. The Vandercook gauge was also mentioned, either alone or in combination.

As to the frequency of checking the height of Linotype slugs, 67 shops operating 301 machines reported they checked 1 or 2 times weekly. A total of 19 shops operating 161 machines said they checked 1 time for each shift; 17 shops with 147 machines checked each time a machine is changed; and 16 shops with 67 machines checked 2 times for each shift. Only 2 shops checked more than 2 times a shift. Three of the larger shops with 182 machines said they checked 2 times each shift and also each time a machine is changed.

Type High Tolerances

Asked what tolerance they permitted from the type high dimension of 0.918 in. for linecasting machine slugs, the majority permitted no more than 0.001 in. either way. Although 25 shops representing 310 machines listed their tolerance from 0.917 in. to 0.919 in., 30 other shops with 194 machines reported the closer tolerance of 0.918 in. to 0.919 in., and 11 other shops with 49 machines set the tolerance at 0.918 in. to 0.9185 in. Still another group of 19 shops using 119 machines reported their tolerance at 0.9175 in. to 0.9185 in. Only in a limited number of cases did shops go below 0.917 in. or above 0.919 in.

To the question, "Within what limits do you consider correct slug height vital on the everyday quality job?", 39 shops with 399 machines reported 0.917 in. to 0.919 in.; 23 shops said 0.918 in. to 0.9185 in.; 22 shops reported 0.9175 in. to 0.9185 in., and 20 mentioned 0.918 in. to 0.919 in. A few others showed greater variances.

When it came to correct slug height vital to work being set for reproduction proofing, they reported still closer tolerances. Some 41 shops representing 222 machines set their slug height at 0.918 to 0.9185; 28 shops with 186 machines said 0.917 in. to 0.919 in.; 23 shops with 147 machines put it at 0.9175 in. to 0.9185 in.; 12 shops with 72 machines said 0.918 in. to 0.919 in., and 11 large shops operating 231 machines permitted no variance. These shops set the height at 0.918 in. and permitted no deviation. Other smaller shops did not allow the variances that were expressed on everyday quality jobs.

PIA Self-Advertising—One of the features of the PIA Convention in Dallas, Tex., Oct. 13-16, will be the self-advertising competition sponsored by Printing Industry of America and Miller Printing Machinery Co. Pictured is Georgina DiNello, holding a statuette of "Benny" which will be awarded to winners in the contest. Rule books and entry blanks may be obtained either from PIA, 5728 Connecticut Ave., N.W., Washington 15, D. C. or Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa.

Correction Methods

There were varied answers to the question, "What methods of slug height corrections do you use within the machine?" However, the great majority of shops (79 operating 159 machines) said their method was to "keep knives sharp, mold disks straight, clean front and back of molds, clean and adjust mold disk guides and studs." Another 19 plants with 147 machines said merely, "adjust and replace knives." Still another 12 plants with 214 machines reported their methods as "adjust knives and check mold slide, and watch lockup slides." Yet another 7 plants with 54 machines said, "adjust knives and check matrices." Other variances were ex-

pressed by plants here and there.

Another parallel question with regard to corrections was, "What methods of slug height corrections do you use external to the machine?" As expressed in the report, the answers to this question were difficult to tabulate because several answers fell into two or more categories. However, answers ran as follows: Scrape bottom of slugs to clean off burrs, pull matrix proofs on precision press and remove high and low or damaged matrices; underlay low slugs; makeready; use a type high planer; keep liners true and clean; keep matrices in good condition; keep records of jobs that cause trouble; keep and review records; sometimes run a display line through Ludlow surfacer; watch proofs for indication; four daily checks by quality control inspection; overlay for repros, perforate plates on metal dump to get rid of burrs and shavings; use the Ludlow surfacer in some instances; use Ludlow brushes; carefully check all incoming new foundry type for type height; matrix font proofing for depth of drive; production control on all proofing; all slugs scraped on side and bottom with makeup rule before going to press; Ludlow slugs surfaced to about 0.9185 in., and large display faces cast 0.0015 in. high and surfaced on a Ludlow surfacer.

How They Answered

In answer to the question, 36 shops with 268 machines said they measured heights of individual type characters in lines; and 85 shops with 647 machines said they did not. Another 8 shops said they sometimes measured.

A total of 82 shops said the variance in height of individual characters within a line gave trouble when taking reproduction proofs, and 31 shops said they did not experience trouble.

As far as the number of shifts which slug machines will usually run without adjustments for maintaining correct slug height, the shops reported all the way from 2 or 3 shifts up to 30 shifts, and one extreme shop said up to 240 shifts.

When asked what they did to help prevent variance in the height of individual characters within a line (with three possible answers given), the vast majority said they threw out bad matrices as they showed up, and they kept the machine very clean. Still others said they also checked all matrices received.

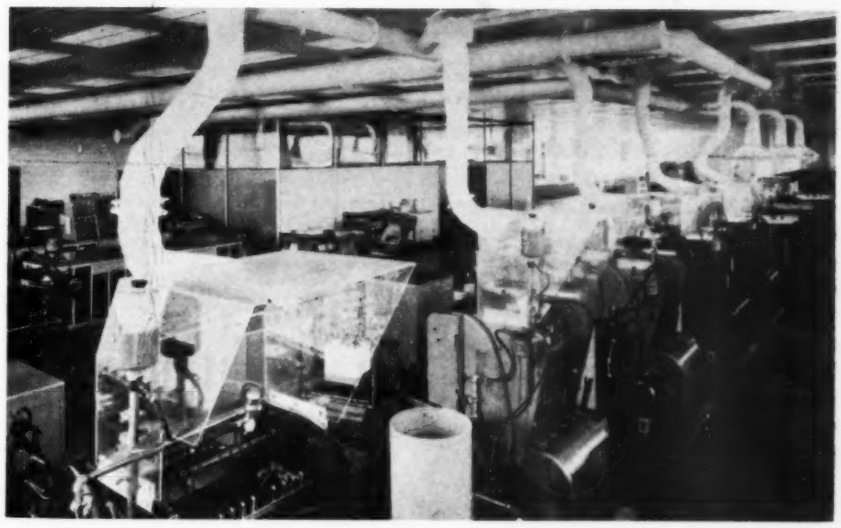
An important part of the survey had to do with preventive maintenance. This elicited a great variety of replies, offering excellent suggestions for other shops. The question was: "What preventive maintenance program, if any, do you employ to assure adherence to standard dimensions?" The respondents were asked to give a step by step reply in accordance with practices. As might be expected, no two shops had exactly the same program. Ranging from the largest shop reporting down to the smaller shops, some typical replies were as follows:

"Keep machines very clean and well adjusted."

"Check slugs each time a liner is changed, or at least twice daily; clean face of mold at least two times each shift; inspect back knives weekly."

"All new matrices are proved by means of accurate proofs; slugs are measured on both ends and in the middle to see that the height is within the limits; bad matrices are singled out."

"At every shift mouthpieces are brushed with brass brush to keep vents open, back and front molds



Transparent Plexiglas exhaust hoods are installed on presses at Connecticut General Life Insurance Co., Hartford, Conn. to eliminate excess spray from offset guns. The transparent material of the hoods avoids obstruction of light and allows visibility around presses.

System Exhausts Excess Offset Spray

Excess offset spray and paper dust are collected and exhausted by means of a specially-designed system installed in the pressroom of the printing department of Connecticut General Life Insurance Co., Hartford, Conn. Individual hoods made of transparent Plexiglas material (see illustration) have been fitted to the delivery end of presses. The clear plastic material prevents obstruction of light and allows the operator visibility of the delivered sheets.

The entire system is connected by ducts and is operated by a Type W Roto-Clone precipitator, manufactured by the American Air Filter Co. Roto-Clones are reported to combine the functions of exhauster and dust separator through the use of water sprays. Collected offset spray and paper dust are delivered in the form of slurry for disposal without creating a secondary dust problem, states American.

Two separate exhaust systems are used on Connecticut General's eight presses. Five Miehle Verticals are equipped with side hoods and are exhausted through a No. 10 Type W Roto-Clone. Canopy hoods are used on three Miehle Horizontals which are also exhausted by a No. 10 Roto-Clone. Each system requires 2700 c.f.m. exhaust volume and operates at a pressure drop of 4 in. Circle No. 273 on Reader Card.

are cleaned with metal polish, wiper is rubbed with Simonize, mold disk guides are oiled, vise jaws are cleaned, and all chips are brushed awav."

"Wipe molds, mold disk, and vise jaws; check wipers; oil mold disk studs and blocks; clean plunger, spacebands (weekly), back of molds and mouthpiece and drill jet holes; oil mold slide and disk monthly; oil machine; check pot temperature."

"Keep clean the back of first elevator jaw, the inside of vise cap, and front and back of molds; periodic cleaning of molds and checking slugs for type high."

"Use good metal at right temperature; keep lockup and mouthpiece properly adjusted to prevent back squirts, which do more to get knives out of adjustment than any other item."

"Daily check of molds, making sure back and front mold wipers are keeping molds clean; clean mouthpiece each shift; constant check of mold disk guide's closeness to mold disk with red lead; changing back knife when needed; keep molds clean and polished.

Time Lost Per Machine

Those contacted were asked approximately how much time per machine per week was lost from production in order to maintain correct slug height. Some 41 shops with 248 machines reported ¼ hr., and 34 shops with 233 machines said ½ hr. Only 11 shops with 82 machines reported more than 1 hr. One shop contacted reported lost time ran only 5 to 10 min., and 4 shops said, "No time lost." Interesting to note is the fact that 4 shops reported "Work done on machines during idle time."

When asked if they would purchase an instrument and spend the time and money necessary to measure depth of drive of all matrices if such an instrument were available at a cost of from $75 to $100, the majority of shops (77) said "No," whereas only 24 said they would.

As to the basic cause of the variance in height of individual characters within a line, 67 shops with 514 machines voiced the opinion that the cause was incorrect drive in original shipment of matrices; 33 shops with 225 machines said it was due to wear; 11 shops with 98 machines believed the cause to be other factors within the machine, and many others believed it was a combination of things.

Monotype Questions

Asked which of four listed methods they used to maintain correct height of Monotype, the majority of shops said they checked type at regular intervals. The next greatest number of shops reported they checked molds at each change. Far less said they checked the product at the start of each shift, or that they checked molds and type when they got complaints. Many checked type at regular intervals and checked molds at each change as well.

As to the frequency of checking, a total of 18 shops said 1 time each week, 5 said 2 times each shift, and 4 said 1 time each shift. One shop said 1 time every 6 months unless there is proofing trouble. Very few checked less frequently than once a week, although some said they checked with the beginning of trouble.

The final question was, "What kind of a tool do you use for checking the height of your Monotype cast type?" The almost unanimous answer (46 out of 58 shops) was the standard hand micrometer. Two shops used the Hacker type high gauge, and three employed the standard hand micrometer and Hacker type high gauge in combination. Only seven other answers were received.

Largest Single Print Order Completed

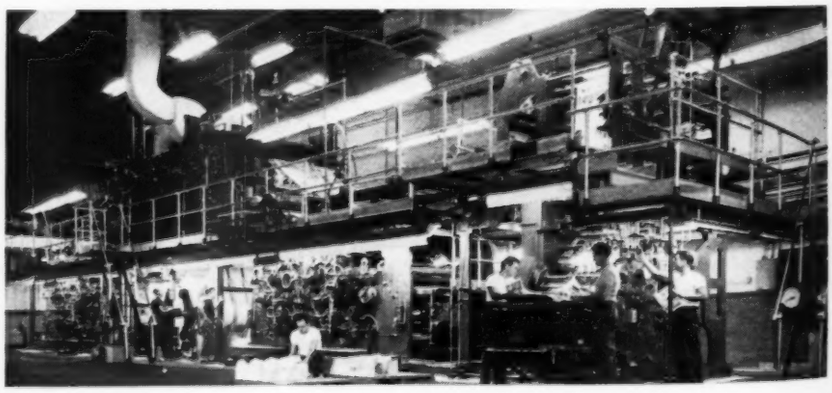
What is reported to be the largest single publication printing order in business history has been completed by three printing firms for The Sperry and Hutchinson Co., commercial trading stamp firm. The initial printing order called for 30 million copies of the 1958 S&H catalog called the *Book of Ideas*.

S&H pointed to the following graphic statistics regarding the 52-page catalog: 7,000,000 lbs. of paper were used; laid end to end a string of catalogs would be 4000 miles long; stacked one on top of the other the catalogs would be 150,000 ft. high (100 times higher than the Empire State Building); 72,000 lbs. of stitching wire stretching 1200 miles were used in the binding operations; if the total amount of paper used were converted to a 12 in. wide strip, its length would be in excess of 80,000 miles; 190 railroad cars (a train more than two miles long) will be needed to transport the catalog to its destination.

Printers of the catalog were: Curtis Publications, Philadelphia; Fawcett-Dearing, Louisville, Ky., and Pacific Press, Los Angeles.

Five presses starting at different times during April and working 24 hrs. a day for 55 days accomplished the printing. All five units are double five-color models built by The Cottrell Company, Sub. of Harris-Intertype Corp.

Each press was capable of completing 135,000 catalogs a day. During the middle of April, when all five presses were running simultaneously, a daily total of 650,000 catalogs was produced.



The largest single publication printing order in business history, according to reports, was partly produced on this Cottrell double five-color press at Pacific Press, Los Angeles.

Officers and directors of Gravure Research, Inc. seated, left to right, are: Oscar Smiel, Intaglio Service Corp., director; Charles Edson, Kable Printing Co., director; Harold R. Maas, Chicago *Tribune*, second vice president, and Edward Keller, Standard Gravure Corp. Standing, left to right, are: John E. Hazel, News Syndicate Co., Inc., retiring president; Theodore J. Stulz, Parade Publications, Inc., retiring director; Carl M. Metash, Parade Publications, Inc., newly elected president; Mark Farrell, Montreal Standard Publishing Co., Ltd., director, and Martin J. Waters, Art Gravure Corp., secretary-treasurer. First vice president Fred G. Bourne, Standard Gravure Corp., was absent when picture was taken.

RESEARCH

Donaldson Speaks at LNA Convention—The lithographic industry has progressed only when it could do a job better or cheaper than another process, stated Andrew J. Donaldson, jr., president, Lithographic Technical Foundation, at the recent convention of Lithographers National Assoc. at Phoeniz, Ariz. "While I cannot tell you exactly what lithographic research can bring," Donaldson said, "I can prophesy that if reasearch can continue to lower our costs or increase the quality of our product, our industry will continue to grow at a faster rate than any other form of Graphic Arts."

Donaldson also discussed developments that are going on in other fields, especially those in competitive processes. Some of the developments mentioned included Champion Paper and Fibre Co.'s experiments with vacuum metallized paper that will have the appearance of foil but handle in printing much like paper; the Strobridge Lithographing Co.'s experiments with lithographing on foil and plastic materials, and the experiments of the Ketterlinus Lithographic Mfg. Co. in lithographing on vinyl sheets. Also discussed were experiments with dry offset; progress being made with nylon plates by letterpress printers; and a new approach to balanced inks that improves process color photography, color correction and color control on the press.

Gravure Research Elects—Carl M. Metash, director of production for Parade Publications, Inc., New York, N. Y., was elected president of Gravure Research, Inc. at its 1958 annual members meeting held recently at the Hotel Commodore, New York, N. Y. Other officers elected at the meeting were: Fred G. Bourne, Standard Gravure Corp., Louisville, Ky., first vice president; Harold R. Maas, Chicago *Tribune*, second vice president, and Martin J. Waters, Art Gravure Corp., New York, N. Y., secretary-treasurer. Newly elected directors are: Charles Edson, Kable Printing Co., Mount Morris, Ill.; Phillip Marco, Detroit Gravure Corp., Detroit; Matt J. Romano, Triangle Publications, Inc., Philadelphia, and Carl M. Noble, Electric Eye Equipment Co., Danville, Ill., associate director.

Plans were set at the meeting for continuation of the research work being conducted at the GRI research laboratory in New York, N. Y. on color correction masking and web press operation. New studies will include evaluation of electronic color scanners for gravure.

Research Is Not Whole Answer—"Many in the letterpress industry believe the whole answer lies in research. We do not," said Edward J. Myers, executive vice president, Reuter & Bragdon, Inc., ad agency, Pittsburgh, Pa., in a recent address to the Chicago Craftsmen's Club. "Research is vital to any industry, but it is never the whole answer. Today we have new materials and systems for makeready, new metals and etching processes for making plates, and new presses that boast higher quality and faster speeds. These developments are the result of research conducted by leading firms in the industry."

Myers continued, "We feel the whole answer is this . . . further research, definitely, but at the same time, utilize the advancements you now have and make letterpress, all letterpress, truly modern. Then promote and sell the revitalized process to the buyers."

ROP Color Research—"Agencies that wish to insure maximum effectiveness for their clients' advertising need to undertake a program of extensive research and self-education (of ROP color) to enable them to take advantage of every advance as it occurs," said Alfonso Mauro, director of production and traffic, Emil Mogul Co., Inc., New York, N. Y., ad agency, at a recent seminar.

Mauro further stated, "The wide variations in present ROP color reproduction show that there are still technical problems in this vital advertising area which haven't been overcome, not the least of which is lack of uniformity in ways of specifying ink colors."

"ROP color for newspapers is a relatively recent development," Mauro continued, "with advances in techniques constantly being made." With ROP color advertising in newspapers steadily increasing and with quality of reproduction varying widely from paper to paper, advertising agencies "would be ill-advised to toss color reproduction problems into the laps of suppliers and pray for the best," he added.

Use the convenient yellow Reader Service Card found in this issue for requesting free literature found in PRINTING PRODUCTION's Graphic Arts Literature section.

ROP color practices receive full treatment before 1200 at Atlantic City Mechanical Conference as

ANPA TACKLES

Newspaper Proct

PROBLEMS confronted in every area of daily newspaper production received the full attention of 1200 newspaper executives and representatives of manufacturing and supply companies at the 30th Mechanical Conference of American Newspaper Publishers Assoc. held at Chalfonte-Haddon Hall Hotel, Atlantic City, N. J., June 22-25. The meeting was among the best attended of these annual conferences.

It was a major effort on the part of ANPA to acquaint its membership with newly-introduced equipment for the newspaper plant, strive for more uniform reproduction in ROP color, further improve black and white printing, and to overcome existing problems between newspapers and advertising agencies. So well did the planners of the conference perform their jobs that most sessions ran beyond allotted times due to the interest expressed in the subject matter presented.

Features of Conference

The exhibit of newspaper printing equipment and supplies once again proved to be a highlight of the four-day meeting. More than 60 companies participated in the show which endeavored to acquaint newspaper personnel with new and existing products.

One feature of the program was a complete day's sessions devoted entirely to newspaper ROP color from preparation to presswork (see page 60). It began with a session on art, photography and engraving in the morning, carried into composing and stereotype operations, and ended in the evening with discussions on press handling of color.

Charges and countercharges flared briefly at a session which ironically was devoted to a better understanding of mutual problems between newspapers and advertising agencies (see page 65). The controversial atmosphere ended, however, on a note of accord and a pledge to renew education efforts of both newspaper and agency personnel.

Honors ANPA Chairman

The conferees took time in the busy schedule to honor their chairman of the ANPA Mechanical Committee, J. Harold Mintun, production manager, Pittsburgh (Pa.) *Press,* who retired as head of this body after three consecutive terms. He was presented a special plaque for having served the longest of any previous chairman.

Also singled out for his service to the ANPA Committee was W. E. Gibbons, production manager, Portland (Ore.) *Oregon Journal.* He is leaving the newspaper industry to become vice president and general manager of Roto Color Div., Pioneer Publishing Co., St. Charles, Ill.

Next year's Mechanical Conference has been tentatively set for Chicago, June 21-25. The hotel is to be announced later. The advance schedule of conferences, also tentative, is as follows: Miami, Fla., 1960; Chicago, 1961; Montreal, 1962.

Wives of ANPA members conducted a planned program of their own under the direction of Mrs. Earl Weiskittel, wife of the press-room superintendent, Youngstown (O.) *Vindicator.* Included on their schedule was a special luncheon sponsored by R. Hoe & Co., Inc.

Opening Conference Speakers

More attention to proven equipment and to basic newspaper techniques while taking shorter, quicker looks at processes of the future gave the conference a slightly different atmosphere than those of reecnt years. "We're going to be turned over to the technician in the next 40 years," said J. Harold Mintun, chairman, ANPA Mechanical Committee and production manager, Pittsburgh (Pa.) *Press* in the opening address, "but the introduction of new machinery is not going to solve our problems if we don't have our solution already on the way before then. . . . As back shop operators, it's up to us to keep the front office informed on the best way to introduce this new stuff."

D. Tennant Bryan, ANPA President and publisher, Richmond (Va.) *Times-Dispatch* and *News Leader,* amplified upon this idea: "Your publisher has the responsibility for see-

ANPA Honors Mintun—The chairman of the ANPA Mechanical Committee for the past three years, J. Harold Mintun, was honored at Atlantic City by committee members for his leadership of the group since 1956. Mintun is production manager, Pittsburgh (Pa.) *Press.* Left to right are: George F. Marshall, production manager, Portland (Me.) *Press Herald* and *Express,* vice chairman of the committee; Mintun receiving a plaque which was presented to him; and W. E. Gibbons, production manager, Portland (Ore.) *Oregon Journal,* who made the presentation.

By EDWARD H. OWEN, *Associate Editor*
and ARTHUR ZIMMERMAN, *Staff Writer*

roction Problems

ing to it that you have the tools, the material and the manpower you need to do your job and you have the responsibility to organize the tools, material and manpower into the most efficient operation of which you are capable . . . It's your responsibility to let your management know how much it's going to cost to do the job in the way he wants it done and then let him decide whether or not it's worth it."

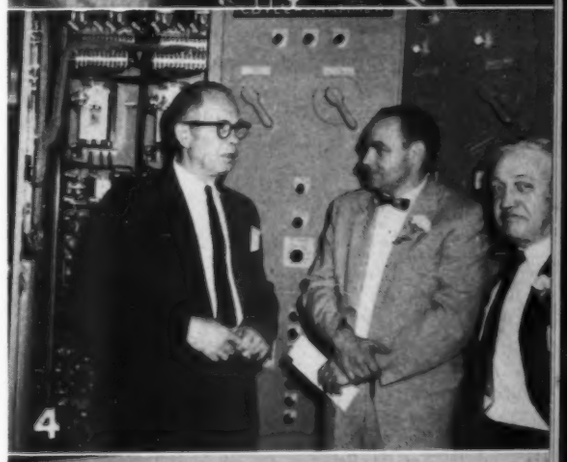
Composing Operations Being Watched

EFFICIENCY in the composing room, ad schedules, Teletypesetter operation, and photocomposition reports became discussion topics on a program devoted to composing room practices at the ANPA Mechanical Conference held at Atlantic City.

Before photocomposition equipment was installed at the South Bend (Ind.) *Tribune*, said its production manager, George Kunz, it took them 13 and a fraction hours to produce a page of retail advertising. The speaker reported this figure has been reduced to nine and a fraction hours per page by means of photocomposition.

Kunz said: ". . . the savings in hours per page is approximately four hours. This four hour savings must exceed the engraving department's cost for photocomposition engraving to make this new method pay. Our records show that their costs have been consistently less. The savings in our stereotype department . . . more than offsets the costs of machine rental and materials cost in the composing room."

Another speaker on photocomposition was R. D. Allen, assistant to the publisher, Quincy (Mass.) *Patriot Ledger*, who reviewed some of the advances made in this process. At the *Patroit Ledger*, where Photon equipment is operated, he said: ". . . we have found that photographic paper is seven and a half times cheaper than film and our op-



ANPA Equipment Show

All names read from left to right

1—Consulting with Shepley Cleaves, at the Ludlow booth were John A. Watters, press superintendent, and William J. Farley, assistant stereo superintendent, both of Providence (R.I.) *Journal-Bulletin*.

2—Elwyn Dirats, Dirats Photo Plate Co. talks with R. G. Dashiell, jr., production engineer, Norfolk (Va.) *Virginian Pilot* and *Ledger Star*.

3—Watching a demonstration at Morrison's exhibit were: Thomas Elliott, composing foreman, New London (Conn.) *Day*; Erv Arpe, Morrison Company; Tim Williams, composing foreman, Meriden (Conn.) *Record*, and George W. Kent, press-stereo foreman, New London (Conn.) *Day*.

4—Cutler-Hammer's display was viewed by A. E. Rosene, production manager, St. Paul (Minn.) *Dispatch* and *Pioneer Press*; Ron White, mechanical superintendent, Charlotte (N.C.) *Observer*, and A. H. James, Cutler-Hammer, Inc.

5—Visitors at the Vandercook booth were: Wilmer F. Eagens, production manager, Norristown (Pa.) *Times Herald*; H. E. Rosberg, production manager, San Jose (Calif.) *Mercury News*; Charles F. Stonier, sr., composing superintendent, and Robert I. McCracken, general manager, both of Norristown (Pa.) *Times Herald*.

erating costs have been reduced by several hundred dollars a month."

Studies Copy Legibility

An optimistic outlook at the fall business period was taken by A. E. Rosene, production manager, St. Paul (Minn.) *Dispatch* and *Pioneer Press*. He said: "We are playing a hunch that business will be booming . . . and are now going over every magazine taking an inventory of the mat supply."

Rosene presented figures derived from a survey made on typewritten ad copy versus pencil written copy: A study of one week's display composition showed that in ads set from typewritten copy, corrections took 7.3% of the total time spent on ads. In ads set from pencil written copy corrections took 16.4% of the total time spent on the ads. In the same study, it was found that original machine composition from typewritten copy was set from 14% to 38% faster than from pencil written copy.

The speaker mentioned several timesaving ideas used at the *Dispatch* and *Pioneer Press*: Assign one man to handle all ad proofing. Instruct markup men to limit the specification of type faces, especially on small ads. For storage of advance display ads, the *D&PP* composing room has labeled its ad racks by days of the week, also evening or morning edition. In addition, each slide is numbered. When the compositor finishes an ad, he places it in the proper rack, marking the slide number on the proof going to the proofreader. When corrections are necessary on that ad, the man making the corrections can find the ad immediately by following the ad rack symbol and number.

TTS vs. Manual Operation

Twice the lines per hour from a Teletypesetter perforator operator over manual linecasting machine operation was claimed by Charles J. Watters, composing superintendent, Miami (Fla.) *Herald*, and he produced figures to back up his claim.

Watters said the standard performance for TTS operation was determined by survey at 400 lines per hr. of single column news matter. The commonly accepted standard, he commented, for linecasting machine keyboarding is 290 lines per hr. "When a manual operator has filled the assembler with matrices he sends the line in to be cast by raising the elevator. From the moment he raises the elevator until the assembling elevator returns to normal position he is unable to touch a single key. The assembling elevator cycle requires about 23% of the production hour. This means that an operator at a keyboard of a linecasting machine has only 77% of his production hour available for actively operating the keyboard mechanism."

The speaker said the 290 lines per hr. figure for manual operation must be reduced by 23% which brings the manual production standard down to 223 lines per hr. Comparing this figure with the TTS keyboard standard, said Watters, gives about a two to one ratio of operator potential.

More evidence that newspaper production executives are measuring operations in their plants was presented in a talk by Harold Hoots, director of production, Decatur (Ill.) *Herald* and *Review*. He said: ". . . 'equivalent' hours per page in 1957 ran from 5.61 hrs. on our best paper to 8.79 hrs. on our worst paper." He described equivalent hours as including total hours worked on page, money paid out for fringes, non-productive work and supervision. Using raw productive hours per page produced, Hoots said the time ranged from 4.15 hrs. per page to 7.8 hrs. per page.

Ad Proof Schedules

The Boston newspapers have taken steps to improve ad proof schedules in their respective plants. This was explained by Frank Dassori, production manager, Boston *Herald* and *Traveler*, who said: "Our larger advertisers were allowed two revises (under the new system). This move not only eliminated the flagrant abuses of our unlimited revise policy, but helped some of our advertisers to improve the efficiency of their advertising departments. Not only does it cost the newspaper money to make ad revises, but it costs the advertiser money to prepare these changes."

The *Herald* and *Traveler* also had the problem of irregular schedules of composing room personnel. Dassori said: "Our solution was to let the news operators and make-up men maintain their schedules, but operate our ad room on a definite three shift basis. At the same time we increased the size of our lobster ad force.

"We find now that our foremen are better able to direct the work, and the large lobster force enables us to do an improved job of meeting proof deadlines on our overnight ads."

What's New in Newspaper Equipment?

FIRST full session of the ANPA Mechanical Conference was devoted to brief descriptions of more than 20 new and improved pieces of newspaper production equipment.

Undoubtedly the heaviest (25,230 lbs.) introduced at this meeting was the Ultramatic stereotyping machine described by I. Tornberg, vice president, Wood Newspaper Machinery Corp. This machine is designed to process stereotype plates from casting through finishing operations automatically without manual handling. Plates are die cast under pressure.

The Ultramatic is hydraulically powered. Pouring manifold, nozzle, and spout are heated under thermostatic control. The machine cannot be started until proper water pressure is available. Desired number of plates can be preset on a counter, which automatically readjusts itself whenever a plate is rejected at the inspection station. The Ultramatic has safety devices built into it in case of a power or hydraulic failure and there is a selector switch for manual control if needed. This machine is preheated so that even the first plate can be used.

d.c. Press Drives

Three manufacturers announced new d.c. press drives.

The Hurletron d.c. press drive, made by Electric Eye Equipment Co., is said to have only one small electric motor to select the combination of units to be powered. No other moving parts are included.

Another component of the Hurle-

tron drive which has no moving parts is the reactor, or transformer, which acts like a gate valve on a water line, to take only the electric power to run the drive motor at the called for speed. The reactor passes this measured amount of electrical power into the rectifier, which converts it to d.c. The main drive motor will run the press at any speed and at the same time stop the press in 7 or 8 sec., said Gil Dayton, who made the report.

C. P. Feldhausen, engineering superintendent, Cutler-Hammer Inc., said the normal accelerating rate for his company's d.c.-Webmaster system was 1000 i.p.h. per sec. and the decelerating rate 1650 i.p.h. per sec., though these rates are independently adjustable over a wide range. Red button stops were made at a number of press speeds between 66,000 i.p.h. maximum and 10,000 i.p.h. minimum without the loss of a web, said Feldhausen.

T. J. Guendel said the General Electric Inductrol press drive has eliminated the threading motor, over running clutch and back gearing. Power consuming resistors are omitted, he said, and efficiency and power factor are high. There is virtually stepless acceleration and deceleration from threading to top speed on the single main motor.

The Hoe fully-automatic reel is simply a modification of the Hoe standard reel, said Raymond R. Dittrich, R. Hoe & Co., Inc. The difference being that certain manual functions on the standard reel—calibration of expiring roll, lowering paster arm, throwing of paster switch to make the splice, and raising paster arm to inoperative position after the splice—have all been automated.

Central Remelt Systems

Two firms reported on centralized melting furnace systems for holding stereotype metal ready to deliver to casting pots.

J. R. Riley, vice president, C. M. Kemp Mfg. Co., told of two such installations by Kemp, at Buffalo (N.Y.) *Evening News* and Miami (Fla.) *Daily News*. Casting pot size can be reduced, said Riley. As an example, for two automatics rated at four plates each per minute, a 6 T. pot can be used with connected heat input of only 35,000 BTU/hr.

T. J. Guendel, speaking for General Electric Co., said G-E offers a variety of central furnace designs ranging in capacity from 18 to 43 T., with heater ratings from 360 to 900 kw.

Camera Equipment

A. J. Powers, vice president, Chemco Photoproducts Co., reported development of a camera designed to be used as a basic black and white production camera and also as a 30 in. camera suitable for all types of color work. Called the Olympian camera, it has a storage compartment in which are housed the ground glass, precision plate holder, two screens, circular and rectangular, and the vacuum back, all of which slide into their assigned slots on separate tracks without being lifted.

In describing the color features of the Olympian camera, Powers said: Chemco designed a new 3-point register system which provides for removal of color correction masks from behind the transparency during exposure, without touching the copy. The 3-point bars match the set in the camera box and are reversible for color composition as well as masking. Using the re-reg-

Viewing ANPA Exhibits at Atlantic City Conference

All names read from left to right

1—At the Shaffstall display were: Raymond J. Cox, production manager, Bangor (Me.) *Daily News*, and Everett Shaffstall, Shaffstall Equipment, Inc.

2—Visitors to the Matrix Contrast Service exhibit were: Earl E. Anderson, production manager, Winnebago Newspapers, Inc., Rockford, Ill.; Russell B. Miller, production manager, Bloomington (Ill.) *Pantagraph*, and Harold Hoots, production manager, Lindsay-Schaub Newspapers, Decatur, Ill.

3—Pictured at Master Etching's booth were: William Guenst, Master Etching Machine Co.; John Dalton, photoengraving foreman, Indianapolis (Ind.) *Star* and *News*, and Fred Orr, News Print Engraving Co., Chicago.

4—Fred M. Jernt, Rudge Associates, Inc. displays the firm's Jetype metal compound to Don G. Scott, mechanical superintendent, Spokane (Wash.) *Spokesman-Review* and Walter E. Hershey, Lanston Monotype Co.

5—At the exhibit sponsored by Capital Tool were: Joseph P. Dorr, Capital Tool & Mfg. Co.; William R. Coddington, mechanical superintendent, Chicago *Daily News*, and Fred W. Cockman, mailroom superintendent, Youngstown (O.) *Vindicator*.

ister device on the camera bed rails and the holder for the transparency kit, it is possible to re-shoot extra separation negatives at another time, with assurance they will fit.

Kenneth B. Beattie, Kenro Graphics Inc., described a new prismatic head which has been made to replace the film head during certain applications on the Kenro Vertical 18 camera. With the prismatic head it is possible to make right-reading photocopies in either positive or negative form in one shot, up to 12 in. by 18 in. on film or paper. It is possible to copy paper to paper, without a negative intermediate.

Another product slanted toward the growing use of color on newspapers was the Sta-Hi Colormount system for mounting original color plates on a measured base for stereotyping. In this system, color engravings are located on a Sta-Hi Chase-Base and set by means of nylon pins, drilled and punched into the base through one of the plates in a set.

Joseph McMullen, production manager, Milwaukee (Wis.) *Journal*, described the new Sta-Hi See-Through router bit. This tool makes it possible for the operator to see the area he is routing, reducing the damage to plates.

A new coating for press blankets, which resists offset and can be used on both first and second impression cylinders, was described by J. W. Foster, jr., Tingue, Brown & Co. He reported that there appears to be a minimum of embossing of the surface, nor is any known normal clean-up compound or solution injurious to the surface.

Mailroom Developments

A short section of a mailroom feeder-conveyor combined with a wrapper storage hopper and a powered feed for supplying the bottom wrap, is the way Lou Fallon, Wiretyer Corporation, described the ABW Feeder for automatically applying bottom wrappers to newspaper bundles.

Newspaper bundles are prepared in the conventional manner. As a bundle moves over the special conveyor section, a switch is operated and a bottom wrap is fed, timed to coincide with the arrival of the bundle.

Fallon also described a "Y" switch. By means of double width wire mesh conveyors, manually positioned sweeps, and two 90 deg. turns, the product of three presses can be split up among two tiers.

Harry Burris, mailroom superintendent, Harrisburg (Pa.) *Patriot* and *News*, pointed out the improvements in the Cheshire mailing machine. A rotary head has been installed that rolls on the labels. Instead of chain guides, high speed grippers lead the papers. The old "T" shaped belt conveyor has been replaced with a straight line.

Composing Machinists Air Problems At Second 'Nut & Bolt' Session

FOR the second successive year, a special session was provided at an ANPA Mechanical Conference to enable composing room machinists to discuss their problems.

The discussion panel was composed of three chief composing machinists and a representative from each of two linecasting machine manufacturers. Ted Gardiner, chief machinist, Indianapolis (Ind.) *Star* and *News*, presided as chairman.

A review of some of the particularly tough linecasting machine problems was presented by I. W. Garrott, chief machinist, Tulsa (Okla.) *World* and *Tribune*. High on his list was the problem of casting overhang slugs. He advised keeping the metal pot temperature at between 535-550 deg. F. Also, keep the heat on the mouthpiece so a machine-cast 2 pt. slug may be melted slowly when pressed against it. The purpose is to provide good fluidity of type metal to secure a good face on the overhanging characters.

Overhang Slug Twisting

Garrott described a hold-down spring he had devised for the underside of the knife block upper liner. He said it keeps a slug with overhanging figure moving against the left-hand knife during ejection, thus preventing the slug twisting sidewise. A coil spring placed in a hole drilled vertically from the lower surface of the liner actuates the hold-down spring.

Mechanical Supt. Jack Hawkins, Greensburg (Pa.) *Tribune-Review*, mentioned that the Mohr Lino-Saw Co. has devised a hold-down spring plate which eliminates slug twisting trouble. A resilient Neoprene block is mounted between the knife block upper liner and the plate to provide spring action of the plate against the upper end of the slug. Harold Mohr, president of the firm, added that the device will not be ready for the market for 90 days. He said the device will automatically adjust to the size overhang figure being cast. No adjustment will be necessary for a change in type size.

'We'll Try Anything New'

One of the world's largest composing rooms, that of the New York *Times*, is always willing to try anything new, said Henry Reichert, chief machinist of the newspaper and also a panel member. In the majority of cases, he added, we

Machinist Panel—Participants in the "Nut & Bolt" machinist session included: William Mulroy, Mergenthaler Linotype Co.; James McGonigle, chief machinist, Philadelphia *Bulletin*; Henry Reichert, chief machinist, New York (N.Y.) *Times*; Ted Gardiner, chief machinist, Indianapolis (Ind.) *Star* and *News*; I. W. Garrott, chief machinist, Tulsa (Okla.) *World* and *Tribune*; Walter Severin, Intertype Company.

you can set quadded and centered matter

FASTER

than straight matter with the ***Linotype Hydraquadder!***

True hydraulic action of the Linotype Hydraquadder means *true accuracy!* There are no rollers, levers, springs or other mechanical linkages; wear is minimized and constant accuracy is assured, without readjustment or other maintenance.

Operational simplicity of the Hydraquadder gives time savings *up to 50%* on all quadded matter. Control is by manual, electrical, or automatic tape. Hydraquadders can be installed on new machines—or on those now in your composing room.

Discover for yourself why Hydraquadder is rated *best* by the men who know. Your Linotype Production Engineer can tell you—or write for the Hydraquadder booklet to Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, N. Y.

• LINOTYPE •

For More Information Circle 116 on Reader Service Card

have been successful with these new products and methods.

Reichert offered some statistics on the size of the *Times'* composing room: Operates 121 machines; employs 27 machinists over three shifts; equipped with 42 floor saws, and 39 Mohr saws.

Use of silicone oil on new plungers to prevent metal adhesion has also met with good results, according to Reichert. He thought he would try it soon on old plungers as well, but advised that this treatment be confined for the moment to new plungers.

Reichert was queried from the floor as to how much silicone oil is used on a new plunger. He replied that a pad is saturated with the oil over which the plunger is rolled.

Carbide Tipped Saws

The carbide tipped saw blade came in for its share of discussion by the various machinists present. Good results with this type of blade were reported by Mechanical Supt. Harvey F. Schieber, Copley Newspapers, Inc., Los Angeles, who added they have not had one of them out of a machine for two or three years. There seemed to be majority opinion against using carbide tipped blades on the Mohr saw. Garrott reported machine operators in his plant prefer a standard blade. There were also several reports of teeth chipping off these blades. Costello said such a blade was tried on one of the Boston *Globe's* Mohr saws and within a week it was damaged beyond further use. Harold Mohr discouraged use of carbide tipped blades on his firm's saws because it isn't economical. Standard blades, he added, are much more economical even with sharpening.

Matrix Transposition Causes

The problem of *Transpositions and Their Causes* was handled by Panel Member James McGonigle, chief machinist, Philadelphia *Bulletin*. One of the first things to check for transpositions, according to the speaker, is the driving shaft pinion for wear.

McGonigle stated that an excessively worn driving shaft pinion can cause matrix transpositions. He suggested a test for this condition. Grasp the clutch arm in the ma-

(*Continued on Page 63*)

Mechanization of Mailroom Continues

AN INTERESTING study between mailroom operations using a loading dock compared with mailroom operations without a dock was made during the mailroom session of the ANPA Mechanical Conference. Chairman of the meeting was Harry Sloan, production manager, New York (N.Y.) *Mirror*.

Russ Vahlbusch, Detroit *News*, was the exponent in favor of a loading dock. At the *News* output of two tying machines feed onto each of five conveyor sections leading to the loading dock. To prevent jams at the point where the bundles from the two tying machines are fed onto the conveyor, a traffic control device developed by Mathews Conveyer Co., is installed. This is a double arm device which allows the output of only one tying machine to pass onto the conveyor at one time.

On the loading dock, a 30-in. Jampol conveyor, which can be operated in either direction, carries bundles until they are shunted by manually operated deflectors. At right angles to the conveyor are 13 power-driven roller sections with a telescoping section housed below. The rollers themselves, on these extensions, are not power driven. However, the extensions are automatically telescoped into the body of the trucks.

Without a Loading Dock

William Dorriss, mechanical superintendent, Des Moines (Ia.) *Register* and *Tribune*, outlined the operation of his paper's mailroom which has no loading dock. "We have no need of a loading dock or anyone working between the tying machine and the truck. On Saturday night we load seven trucks at a time and better than 100,000 complete papers an hour with this system," said Dorriss. Mailers work on the take-off from the pressroom, put all papers not needed for direct tying on an overhead conveyor where they circle until needed by the mailroom workers.

Bundles are chuted into the trucks in reverse order to which they are to be thrown off the truck. The driver does not look at the bundles as he loads them, but checks them as he throws them off. Blank bundles, or of a predetermined equal size, are not marked. The driver has a list of how many such blank bundles to leave at each stop. Each chute has two delivery points so that when one truck is loaded, the switch is pulled to the other delivery point and no time is lost between the loading of trucks.

Bottom Wrapper Machines

Three versions of a bottom wrapper device were described. One was a self-designed model in use at the Philadelphia *Bulletin*, described by Richard Powers, assistant mechanical superintendent.

Over-all length of the machine is 5 ft. 4 in. As the leading edge of the bundle engages the first finger protruding through the surface of the machine, it automatically brings up gate fingers which hold back the next bundle momentarily. The kraft wrapper is carried along by the first bundle. As the front of the bundle engages a second finger, the kraft paper is severed behind the bundle and below the surface of the machine. The paper is projected up through a slot immediately for the next bundle. When the front of the bundle depresses the third finger, nothing happens until the rear of the bundle allows the finger to come back up. This actuates pusher arms which position the bundle in the tying machine.

Speed of the wrapper feeder is limited only by speed of the tying machine.

James Harrison, production manager, Toronto (Ont.) *Globe* and *Mail*, described a portable bottom wrapper machine operating in his plant. It is designed for applying a bottom wrap in any length from 12 in. to 26 in. at speeds of 40 bottom wrappers per min. The width depends upon the width of the roll of kraft used.

Two top and bottom wrapper machines, built by T. W. & C. B. Sheridan Co., are being used in the Detroit *News* mailroom, according to Russ Vahlbusch. The operation is devoted entirely to the advance Sunday run. As stacks reach the end of the roller table, the table narrows thus centering the stacks for the wrapper machine. Stacks of papers from the roller table are spaced one tying machine cycle apart by clamps

mounted on the in-feed end of the accelerator table. The clamps are activated by limit switches spaced about 18 in. apart on the accelerator table. When both switches are contacted simultaneously, by individual stacks, these clamps hold the second stack long enough to permit proper spacing for entrance into the wrapper machine.

The bottom wrapper is supplied from a roll of kraft paper mounted beneath the table bed. The kraft is cut by passing between a steel knife and an aluminum roller. As the stack continues down the conveyor it activates an identical switch which brings the top sheeter and applier mechanism into operation. The forward motion of the rollers on the main portion of the wrapper machine moves the stack onto the in-line feeder which carries the stack to the tying machine. A speed of 16 bundles per min. is achieved.

Two newspaper counters were reported upon at this session, the first being the account of Robert C. Nelson, mechanical superintendent, Detroit *News*, on the RCA counter in operation at his plant.

L. R. Durant, assistant manager, Materials Handling Div., Miehle-Goss-Dexter, Inc., presented a progress report on the development of the Goss newspaper counter. This instrument utilizes a photoelectric cell which detects the shadow of the fold created by a beam of light. "The testing to date has indicated that newspapers with laps between folds as small as ½ in. can be accurately counted," said Durant.

Paper and Ink Studies Reported

THREE general subjects were discussed in the black and white pressroom session of the ANPA Mechanical Conference. Chairman of the meeting was Robert C. Nelson, mechanical superintendent, Detroit *News*.

First, W. Watson Southam, vice president, Southam Newspapers Ltd., Toronto, Can., spoke on what management must consider before buying new press equipment. Factors affecting the final decision are: Present and anticipated page capacity requirements; circulation demands and necessary ROP color facilities; available space; conservative operating cost per unit of product; choice of press equipment.

Paper and Ink Tests

Extensive, but as yet inconclusive, experimentation leading to a reliable test of printing smoothness of newsprint was described by C. F. Geffken and W. K. Herrmann, J. M. Huber Corp., and by Sol Steinberg, New York (N.Y.) *Times*.

Geffken and Herrmann used the printing wedge test to attempt to determine the minimum ink film on plate needed for complete uniform coverage of a given sheet of newsprint. They found that ink on the paper is not directly proportional to ink on the plate in the printing

Camera Views of ANPA Equipment Displays

All names read from left to right

1—Joseph Dupre, Photon, Inc.; Peter P. Rudegeair, jr., mechanical superintendent, Lebanon (Pa.) *Daily News*; William Baumrucker, Photon Inc., and James M. Fox, general manager, Perth Amboy (N.J.) *Evening News* discuss phototypesetting machines at the display sponsored by Photon, Incorporated.

2—Visitors to the exhibit floor were: J. R. Morton, composing superintendent, Ravenna (O.) *Record* and *Courier Tribune*; George A. Boucher, Mergenthaler Linotype Co.; William D. Hahn, composing machinist, Ann Arbor (Mich.) *News*; Jack Hawkins, mechanical superintendent, Tribune-Review Publishing Co., Greensburg, Pa.

3—Consulting with John R. Thomas, Wesel Manufacturing Co., were: Joseph G. Curado, George H. Morrill Co.; Frank Stanczak, ANPA Research Institute Laboratories; Ralph R. Cranmer, executive vice president, Williamsport (Pa.) *Grit*, and Ray K. Denby, mechanical superintendent, Regina (Can.) *Leader Post*.

4—Sta-Hi's display was viewed by Edgar A. Mills, jr., Eastern Newspaper Supply Co.; Leo Bottoms, stereo superintendent, Washington (D.C.) *Post*; John V. Landau and Ernie Klostermann, Sta-Hi Color Service; William G. Dorriss, production manager, Des Moines (Ia.) *Register & Tribune*; Vern Spitaleri, Sta-Hi Color Service.

range. Essentially, in the range of ink films for newspaper printing, transfer is related to the fraction of print area contacted and the ink absorbed at the contact points.

Ink misting and its control was discussed by Victor J. Porth, jr., Interchemical Corporation. Basically the factors that affect ink misting, Interchemical concluded, are press speed, ink film thickness, atmospheric conditions, and ink formulation.

Reports on Ink Misting

Stanley Southard, George H. Morrill Ink Co., described his firm's 20-year search for a low misting newspaper ink in conjunction with tests performed at the Grit Publishing Co., Williamsport, Pa. Result of the study was the development of Morrill's Lomist news black ink.

To demonstrate the performance ability of Lomist, Southard recalled that Grit installed an air filter system in an effort to get rid of ink mist. In this unit the filter medium is automatically advanced as soon as a predetermined back pressure builds up. It developed that for every 100 ft. of filter consumed with normal ink, only 40 ft. were needed when Lomist was being used.

Lawrence Mertes, Chicago *Sun-Times;* Richard Powers, Philadelphia *Bulletin;* and J. Harold Mintun, Pittsburgh *Press,* each described the air filter system used at their respective plants to exhaust air and control ink-mist in the pressroom. There is a growing tendency, because of the high efficiency of the filters available, to re-circulate the filtered air in order to conserve heat during the winter months.

Printing ROP Color on the Press

PRINTING of newspaper color based upon several actual press installations was explained by several speakers at the ROP color pressroom meeting held at the ANPA Mechanical Conference.

One of the press installations described is at the Buffalo (N.Y.) *Evening News,* where a new Wood four-color unit is located at right angles to the press line. Henry Garland, mechanical superintendent, Pittsburgh (Pa.) *Post-Gazette,* and moderator of the meeting, gave an account of a visit to the new Buffalo plant. The plant houses only those operations which follow page molding.

Arrangement of Presses

Two press lines contain five 5-unit presses and there is space for a sixth, said Garland. The basic press at the Buffalo *News* is two units behind the folder and space for a third there, and three units in front of the folder. By means of angle bars, one web can be printed on one standard and one four-color unit and barred into either of the adjacent press lines.

"The web from the four color unit can be inserted where desired among the other webs. It can also be turned over if necessary. Or slitting can be done in the top deck and the slit portions directed over any of the four formers," he said.

"One web can be run through the color combination and directed to either adjacent press line. Clutches at floor level make possible appropriate coupling.

"This color web can carry—in second impression position — four pages of four or less colors in a straight run, or eight pages of four colors or less in a collect run. Or it can be run as a web carrying no color."

Garland also reported: "This press installation is the first to have underside or tension lockup operated by the Wood automatic lockup. It is also the first installation which permits setting color on Wood fountains from a panel control position. This panel bears the full ink feed controls for one standard unit. There are two buttons for each column of each of the four pages across the cylinder. A green button is positive and adds ink when it is pushed. The other button is red or negative and cuts the color when it is pushed. Actuation is by compressed air. The buttons each control a small valve which transmits a pulse of air through a plastic tube to a piston which actuates a small ratchet on each blade screw. One depression of a button turns the ratchet just a predetermined fraction of a turn. Additional jabs of the button are required for each additional increment."

More Next Month

Reports of the stereotype discussions held during the ANPA Mechanical Conference in Atlantic City will appear in the August issue of PRINTING PRODUCTION.

Tubular Press Color Printing

Printing color on a tubular press was the subject of a talk by Harry Wingard, press-stereo superintendent, Monterey (Calif.) *Peninsula Herald.*

The *Herald's* press today is a Standard 24-page Duplex Tubular with a color cylinder on both the first and second impressions of the No. 1 unit. When printing three colors and black, Wingard remarked, it is possible to produce 20 pages in two sections, with full color on front and back, and one color and black on page 2 and next to back in one of the sections.

"For many years we have stocked only three inks—cyan blue, magenta and yellow. From these colors and white, we mix and match any desired hue, tint or shade," said Wingard.

Wingard made the following suggestions for color printing on a tubular press: All blankets on the color lead should be of the same material. Use paper of the best quality on the color lead.

Sharpest reproduction is obtained by printing the colors in order: Yellow, magenta, blue and black last. Waste at the start of the run can be held to a minimum by starting with the color on the light side. Any areas on the color plates that might punch from the normal impression should be relieved on the stereotype plate by underlaying the mat with gum paper before casting. When necessary, plates should be cocked on the press by carding with gummed packing felt.

Ways to Print Color

Ronald H. White, mechanical superintendent, Charlotte (N.C.) *Observer,* discussed some of the general considerations guiding selection of color layouts for newspaper printing presses. "Floor space, positioning demands, black and white capacity all figure in the final layout," White said. "Getting the best,

FREE—Would you like a large two-color reproduction of this illustration by Robert Lopshire suitable for framing? Just drop us a line and ask for your free print of "Jet Fire".

When copy calls for quality . . . use POWERDOT Stripfilm

Chemco Powerdot triacetate base stripfilm has the range to capture the most difficult tonal scale with great fidelity. It is two and a half times faster than any other hard dot orthochromatic stripping film. It is unequalled for opacity and produces the sharpest line negatives possible. It is designed to be used with all standard light sources including the most economical. Available in 12 cut sheet sizes and 9 roll sizes.

Powerdot stripfilm with its darkroom companions Powerdot developer and Power-Fix are but three of many quality Chemco products which include uniformly fine film, chemicals, cameras and equipment. They are the results of 34 years of constant research and careful manufacture by Chemco . . . a company devoted solely to the needs of photomechanical reproduction.

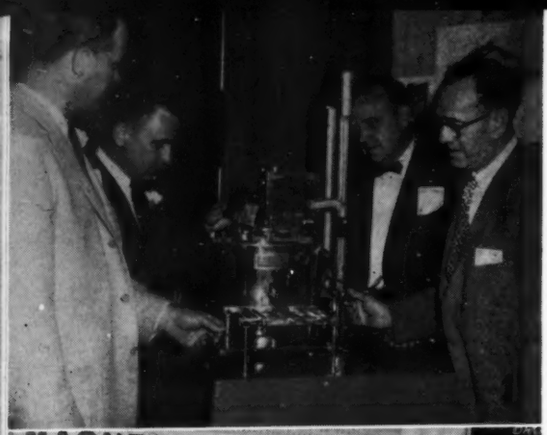
chemco

CHEMCO PHOTOPRODUCTS CO., INC.

Main Office and Plant—Glen Cove, N. Y.

Atlanta Boston Chicago Dallas
Detroit New Orleans New York

For More Information Circle 40 on Reader Service Card



most flexible layout for the dollar invested is why many different combinations grow up.

"The hump deck, or attached color cylinder, eliminates long lead misregister by locking the two registering plates in position to print on a common impression cylinder. The hump releases black capacity but limits the positioning flexibility for running spot color. Hump decks and a unit to unit lead can give considerable color versatility.

"For spot color versatility, the use of a half deck printing couple may be the answer."

Scott Superimposed color printing couples over black units are part of the equipment used in printing spot and progressive color at the Dayton (O.) *Daily News* and *Journal-Herald*, said Robert Schliep of that organization. "This arrangement permits the full black printing capacity of the press whether or not color is run at the same time."

Joseph E. McMullen, production manager, Milwaukee (Wis.) *Journal*, and Joseph Reid, press superintendent, Chicago *Tribune*, discussed magazine stack press combinations. Robert Knight, Indianapolis (Ind.) *Star* and *News*, talked about the Wood four-color unit; and Roy Coates, press superintendent, Grand Rapids (Mich.) *Press*, described portable fountains and the Dayco Separator.

ANPA Exhibit Floor Vistors

All names read from left to right

1—Discussing the Kemp metal furnace were: Roy Vickery, stereo superintendent, Atlanta (Ga.) *Journal* and *Constitution*; Maurice E. Cotton, assistant business manager, Omaha (Neb.) *World-Herald*; J. R. Riley, C. M. Kemp Mfg. Co., and Jack Innis, stereo superintendent, Indianapolis (Ind.) *Star* and *News*.

2—Looking at the satellite at Brooks & Perkins' exhibit were: L. M. Gossett, assistant production manager, Chicago *Tribune*; A. A. (Bud) Lefebvre and Norman J. Pozniak, Brooks & Perkins, Inc., and Richard L. Fitzgerald, Detroit.

3—On the conference floor were: John Pritchard, R. Hoe & Co.; Howard C. Fitzsimmons, mechanical superintendent, Monterey (Calif.) *Peninsula Herald*, and Gordon Dixon, mechanical superintendent, San Rafael (Calif.) *Independent Journal*.

4—Manning Fairchild Graphic Equipment's display were: A. Mayberry, J. Lafferty and H. R. Dahl.

5—Wood Newspaper's booth was viewed by Harry R. Wingard, press-stereo superintendent, Monterey (Calif.) *Peninsula Herald*; I. Tornberg, Wood Newspaper Machinery Corp.; R. Matteson, plant superintendent, Toronto (Can.) *Star*, and John J. Shea, Wood Newspaper Machinery Corp.

6—Harry Rouch, Wescott & Thomson, Philadelphia; Joseph P. Quigley, Lanston Monotype Co., and Fred N. Smith, jr., Wescott & Thomson discuss Monotype's display.

ANPA Research; Also, Figures on Powderless Etching

THE engraving and research session of the ANPA Mechanical Conference was opened with a talk by Frank Stanczak on the functions and programs of the ANPA Research Institute of which he is a staff member. Randall Barton, production manager, Phoenix (Ariz.) *Republic* and *Gazette*, moderated the session.

To make certain that the Institute was tackling the important cost and quality problems of newspapers, the consulting firm of Arthur D. Little made a survey of newspaper production operations and costs. One finding was that newsprint accounts for the greatest proportion of the production dollar for all newspapers. The ANPA Research Institute tested the basis weight of newsprint samples submitted by several ANPA members. The samples represented the output of 42 North American mills. Samples varied in weight from 30.2 to 35.3 lbs. All of this newsprint sold as 32-lb. paper. Six months later the same newspapers again submitted samples and the weight ranged from 30.5 lbs. to 35.2 lbs.

Another problem which the ANPA Research Institute is studying is that of printing quality and runability of newsprint. We have learned that three properties are responsible for 50% of the variations observed in the printability test, said Stanczak. Of this 50%, smoothness accounts for 30% and brightness and hardness for 10% each. The Institute is expanding efforts to determine what characteristics of newsprint account for the other 50% variation in printing quality.

The Research Institute has also tested 25 samples of standard black inks of eight manufacturers. Wide variations were found in the physical properties of these inks. As a result of this study and a meeting with the manufacturers, the National Printing Ink Research Insti-

tute of Lehigh University will cooperate with the ANPA Research Institute in news ink research.

The ANPA Laboratory also has an ROP color research project underway with the goal of establishing a photographic system of color correction procedures designed specifically for newsprint and ANPA-AAAA color inks. The project is based on procedures suggested by Eastman Kodak Co.

Powderless Etching Report

Fred Orr, News Print Engraving Co., Chicago, described his firm's experience with the powderless etch processes, utilizing both aluminum and zinc plates.

Using Imperial's Vitaplate-Vitasolv process, Orr said: "We keep accurate records of our procedure and only deviate from standard operation when absolutely necessary. We etch our plates at 81 deg. F. and use a paddle speed of 520 r.p.m. We etch 65 screen halftones from 0.005 to 0.006 in. depth in 2½ to 3 min. Our combination plates are etched to 0.030 in. plus. We find about ten 18 in. by 24 in. combination plates or 125 oz. of metal can be dissolved in one bath.

"One of the strange situations that we have encountered is the principle of being able to add extra amounts of nitric acid to the etching bath to help relieve slight undercutting. This is against all theory of etching, but nevertheless it works."

The speaker continued: "I have attempted to take the last full year prior to powderless etching in our plant, as a comparison for our 1957 year, during which practically all of our zinc was done by the powderless etching method. We show the following percentages of improvement:

"Labor cost per thousand square inches of zinc etched reduced 21.7%. Cost of chemicals, including royalty charges, reduced a few hundred dollars. Over-all savings in dollars and cents in labor and chemicals, including royalty payments but not including metal costs, approximately 28%."

Highlighting Processes

Three speakers spoke on highlighting processes: Ralph R. Cranmer, executive vice president, Grit Publishing Co., talked on Kemart and Dropdot Processes; Andrew Ragona, New York *Times*, spoke on the Kromolite Process; and Linwood L. Cridlin, engraving superintendent, Baltimore (Md.) *News-Post*, discussed the Fluorographic Process. All of the speakers agreed that the highlighting and brightening processing was becoming more essential with the growth of powderless etching methods.

Machinists' Discussions

(Continued from Page 58)

chine driving pulley with machine in normal position and wiggle the arm back and forth to see if there is excessive play between the driving pinion teeth and the teeth of the mold slide-gear cam. Excessive play causes jerky motion of the main cams as well as the intermediate drive system which can be the cause of matrix transpositions.

He offered a number of points for minimizing matrix transpositions in the assembler front and entrance. Be sure the matrix is not striking assembler entrance plate or is being slowed up by rubbing on any of the partitions. Outside lower ends of partitions should be curved in direction of the star wheel. Star wheel spring tension should be adjusted so that it will push the matrix and the assembled line evenly against the spring pressure of the assembler slide.

Blowing out machines in a cleaning operation was another discussion topic. Reichert reported cleaning is done in his plant either in morning before the shift comes on or at lunch time. Garrott said it is done at Tulsa *World Tribune* on Sundays, but added that saws and quadders are blown out twice a day. Gardiner remarked he has difficulty getting this done because of shift arrangements.

Someone wanted to know if some kind of vacuum cleaner couldn't be used to suck up metal chips. He thought he had heard there was a machine designed for doing this. No one knew of such a unit, but Gardiner quipped, "It would probably be so heavy after the first few machines had been serviced you couldn't drag it through the department."

McGonigle remarked he does not like the practice of blowing dirt and chips off composing machines because it throws too much dirt around the room.

Dross in Crucible Throat

A question submitted to the panel read: *What causes accumultion of dross in the crucible throat?* It was the consensus of opinion that either the metal was dirty or dross formed in the crucible throat, particularly on gas heated pots because of improper heat distribution, which interferes with the flow of metal to the mouthpiece. William Mulroy, Mergenthaler Linotype Co., a panel member, said the plant with this condition might be caused by dumping sweepings from the floor into the pot. Also, on machines used largely for straight matter, only approximately 12 picas of the metal flow is permitted to pass through the mouthpiece jets. Thus, the 18 pica "baffle" churns around in the throat which action eventually builds up dross formation in the crucible throat.

Frank Foster, Intertype Company, suggested that sometimes an operator forgets to hang up a pig and the metal level in the pot gets low which causes this condition.

The Pyrometer Question

"Why haven't Intertype and Linotype installed a pyrometer on each metal pot?" was asked by Coleman Wright, assistant mechanical superintendent, San Bernardino (Calif.) *Sun*. Walter Severin, Intertype Company, a panel member, and Mulroy of Mergenthaler agreed it was too costly and didn't think customers would be willing to pay extra for such an instrument.

This was followed by a discussion of pyrometers in which it developed that most newspapers, even the New York *Times*, would prefer to stick with the 2 pt. machine-cast lead (an old favorite among machinists) for determining temperature of mouthpieces. An interesting aside to this was reported by John R. Morton, composing superintendent, Ravena (O.) *Record*, who said a G-E oven thermometer is used in his plant. Chairman Gardiner said a pyrometer was provided at the Indianapolis *Star* and *News*, but machinists won't use it. The main trouble is that they never know about the accuracy of the instrument.

JETYPE

New Durable Lightweight Metal Compound Introduced at the ANPA Mechanical Conference-June 1958

for use in—

Jetype Display Type Caster
casts slugs up to 48 picas long
and up to 216 point in size

Jetype Conversion Units
for Linotype, Intertype, and TTS Machines

Jetype Printing Plates
flat or curved

Jetype Material
leads, slugs, base, and furniture fonts

This entirely new material eliminates many of the composing room, stereotype department, printing, metal storage and handling problems inherent in the use of lead type metal. It is one fourth the weight, has no air bubbles, needs no burnishing, saws beautifully, has a fine affinity for ink, requires minimum makeready, gives a sharp impression, is ideal for reproduction proofs, molds mats perfectly, stands up for long runs, retains dimensional accuracy, is reused by granulating with no loss and is clean, easy and economical to use. Ludlow mats can be used and a new series of faces and larger sizes made especially for the Jetype Display Type Caster will be available. This material and equipment will soon pay for itself in any plant, regardless of size. Ask for specimen slugs, a demonstration of equipment and terms.

RUDGE ASSOCIATES, INC.

32 Cass Street
Springfield 1, Mass.
William E. Rudge

5847 Lawrence Ave.
Chicago 30, Ill.
Fred M. Jernt

For More Information Circle 246 on Reader Service Card

Ad Agencies Argue that Newspapers Don't Follow ANPA Recommendations

MISUNDERSTANDINGS and problems between newspapers and advertising agencies became a subject for debate in a session devoted to this phase of newspaper operations during the Atlantic City ANPA Mechanical Conference. On hand were a number of advertising production executives who were given the opportunity to voice their opinions on newspaper practices.

The stage for one of the liveliest sessions of the entire conference was set by ANPA Mechanical Committee chairman, J. Harold Mintun, when he opened the meeting with the reading of a published report blaming the newspaper industry for failure to reproduce ROP color correctly.

AANR Swings at ANPA

The American Assoc. of Newspaper Representatives charged that newspapers are losing business in the advertising field because of poor and varied ROP color. Because of this condition, a spokesman for AANR believed the ANPA Mechanical Committee was an inactive body or had been discontinued. There will only be minor gains in ROP color advertising until newspapers learn to provide more unformity in color printing, Mintun said the AANR said in its report.

Mintun added that Cranston Williams, ANPA general manager, charged the AANR had not found out what ANPA is doing for improved ROP color reproduction prior to the Chicago meeting at which the report was delivered. Mintun commented that all the ANPA Mechanical Committee can do is recommend; it cannot force anyone to do anything.

His latter statement provoked disagreement from an ad agency executive in the audience. The ANPA mechanical group has done very little to provide agencies with information, charged Michael T. Winow, Ogilry, Benson & Mather, New York, N. Y. It refuses to say, he added, that one method of operation is better than others. He further criticized the committee for doing little to get newspapers to standardize on page depth, column width, etc.

The ANPA, Winow continued, appears to be serving newspapers first, and the agency, which he termed the customer, comes second. He called for more forceful leadership on the part of the ANPA Mechanical Committee in an effort to get newspapers to adopt its suggestions.

Sets Record Straight

In rebuttal was Richard E. Lewis, manager, ANPA Mechanical Dept., who said it isn't possible for ANPA to say what method is best. "We recommend only," he added, but can't tell the newspapers to do it. He countercharged that agencies are not following recommendations already made on newspaper color.

One agency executive advised that

NEW Air-Grip VACUUM CHUCK

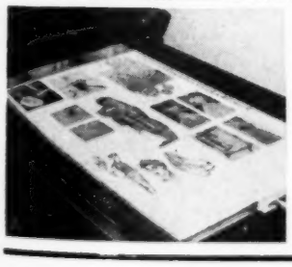
SAVES ON BLOCKING—LOCKING—CLAMPING—PASTING

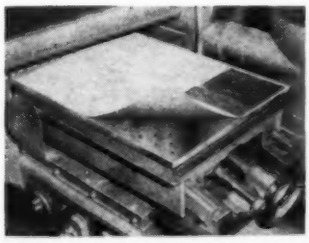
HOLDS PLATES LEVEL AND RIGID ON ROUTER, PROOFING PRESS AND SHAVER

The Air-Grip Vacuum Chuck is a hollow-cored magnesium plate. Spaced holes are drilled into air compartments with vacuum pump attached. Suction is created within the chuck, atmospheric pressure grips plates placed over the holes. It is simple, efficient and easy. Machined to very close tolerances, the Air-Grip Vacuum Chuck system holds plates flat, level and rigid on router, proof press or shaver. The center of a plate cannot buckle up since it is gripped as firmly at the center as at the edges. No blocking, locking, clamping nor pasting are required. Plates are instantly released from the Air-Grip Chuck by turning the suction shut-off cock.

PROOFING — By covering the face of the chuck with a suitable cushion, plates placed on the cushion are gripped firmly and flat with no danger of the rollers picking up small cuts during proofing. This system is easier, faster and better than pasting down loose plates.

SHAVING — Unmounted plates placed face down on the chuck are held solidly, so that an even height of shaving is maintained. A number of plates may be placed on the chuck at one time. The system handles plates of any thickness down to 16 ga. This fast, efficient method saves time and labor.





Let us send you literature, prices or additional information

THE Monomelt COMPANY, INC.

1611 N. E. POLK • MINNEAPOLIS 13, MINNESOTA

For More Information Circle 124 on Reader Service Card

ANPA be more forceful in recommending suggestions to newspaper members. Donald V. Weber, production manager, Houston (Tex.) *Chronicle,* commented that recommendations made by American Assoc. of Advertising Agencies have not been adhered to. He compared this to the situation which prevails in the ANPA. ANPA Committee members can recommend methods, said Burt B. Mader, engraving superintendent, Boston *Christain Science Monitor,* but could not enforce them.

A representative of N. W. Ayer agency, Philadelphia, asked why newspapers don't use the color specified for an ad. Nine out of ten orders never specify color for an ad, answered Girt Cochrane, production manager, Charleston (W. Va.) *Gazette.* Mintun added that many agencies never specify the color. He said newspapers are having trouble with ink companies in getting accepted color shades.

Wants More Standardization

Frank Stolz, production manager, Batten, Barton, Durstine & Osborn ad agency, New York, N. Y., further chided newspapers for not standardizing on mechanical specifications. He was introduced by the chairman of the session, James L. Stott, vice president, Richmond (Va.) *Times-Dispatch* and *News Leader.*

Stolz said the most irksome to the agency production man is lack of standardization in the last 10 years in newspaper column widths. He asked ANPA to put on another drive to get the remaining 70 odd newspapers to adopt the 11-pica standard.

The speaker also called for action on the problem of page depths. Standard depths, he said, would save money and improve the appearance of the advertising and the newspaper page.

Handling Ad Materials

Suggestions for effective handling of national advertising materials were presented by two speakers. First of these, Andrew Ragona, director of production, New York (N. Y.) *Times,* held that the secret of good newspaper printing is contrast.

He commented: "By contrast I do not mean the addition of black masses, but rather the elimination of tones and unnecessary details."

ANPA Conference Pictures

All names read from left to right

1—Theo. Hommel, Unitronics, Incorporated discusses color equipment with Ralph Tufts, color coordinator, Buffalo (N.Y.) *Evening News.*

2—Layton Smith, Ray Abel and Henry Honig, all of Universal Mono-Tabular Corp., are seen at the firm's booth.

3—Frank J. Stephan and Harry W. Knoll, H. B. Rouse & Co. demonstrate the Rouse saw for Herman Diamond, Margach Co.

Second speaker on the subject of handling national advertising materials, Burt B. Mader, engraving superintendent, Boston *Christian Science Monitor,* said agencies generally deserve credit for good preparation of national advertising duplicates.

He suggested a number of points for improved reproduction from this material. Among these were that halftones should be free from subsurface bridges between the dots in the highlight areas. These bridges are a by-product of what were originally connections between dots prior to reetching. Such conditions, he said, show up in the final newspaper page but are not noticed in the engraver's proofs. Dirtiness or "bottoming-up" in presswork, he added, is frequently attributed to this cheater of true depths.

Mader also said color mats should have complete, undisturbed, accurately positioned register marks.

Incompetency on Both Sides

More floor discussion followed the speakers' presentations. One New York ad agency executive recognized there is a lot of incompetency among both agency and newspaper personnel. He said there is a need for a big education job which may take years and then blamed acceptance of inferior material on people above production—management and customers.

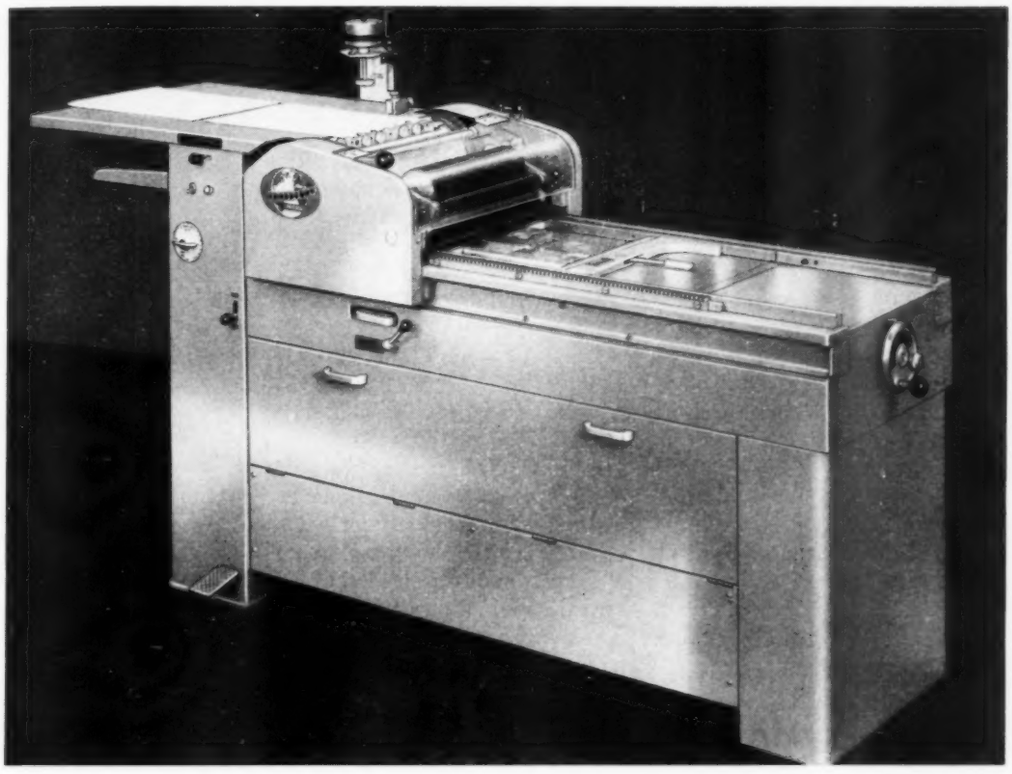
Harry Eybers, production manager, Washington (D. C.) *Post-Times Herald,* called for an end to the practice of agencies providing newspapers with plastic mats which are not thermoplastic and will not stand hot molding. He asked Stolz why artists couldn't convert to the point and pica system of measurement. The only reason Stolz could advance for this is that layouts "are made by a different breed of individuals." He added they are having enough trouble getting art directors to adhere to simply expressed inch measurements.

Education must extend far beyond the agency, thought a Philadelphia agency executive present. Agencies, he said, have a selling job to do on own clients. They must not accept copy that does not lend itself to good newspaper reproduction.

The session ended with comment by Mr. Winow who sparked the early debate. It was his belief, he said, that nobody checks their material—newspapers or agencies. Everyone depends to a large degree on the supplier. He wants newspapers to tell agencies when material is not up to their standard and added, "we hardly ever hear from the newspapers."

Vandercook Universal I

Designed to have Universal Appeal to Printers, Typesetters and Plate Makers All Over the World! Mass Produced for Greatest Value!



Features...OF THE NEW VANDERCOOK UNIVERSAL I TEST PRESS...

- Maximum form or plate size 15″x22″
- Hand or power operated
- Plastic covered power inking system with 20-second form roller change and adjusting knobs for setting form roller height. No other adjustments required.
- Automatic washup
- Wedge type adjustable bed with range of .240″
- Automatic ink feed
- Automatic Short Travel Cylinder Trip
- Will print full length galleys

OVER 20,000 VANDERCOOKS
VANDERCOOK PRE-PRESS EQUIPMENT
THROUGHOUT THE WORLD

VANDERCOOK & SONS, INC.

General Offices, Research Laboratory, Demonstration Room & Factory
3601 West Touhy Avenue, Chicago 45, Illinois Phone: ROgers Park 1-2100

Eastern Sales and Service
205 W. 34th St., New York 1, N.Y.
Phone: BRyant 9-6270

In Canada
Sears Limited

Western Sales and Service
3156 Wilshire Blvd., Los Angeles 5, Calif.
Phone: DUnkirk 8-9931

For More Information Circle 182 on Reader Service Card

Lithographic Future Viewed Optimistically by LNA Members

THE continued progress of the lithographic industry in serving the printing needs of American business was viewed with confidence by more than 200 lithographers attending the recent convention of Lithographers National Assoc. at Phoenix, Ariz. In the words of Carl N. Reed, LNA president, the progress lithography has made in the past 15 years is only a prelude to future change and development.

L. E. Oswald, plant manager and treasurer, E. F. Schmidt Co., Milwaukee, Wis., was elected president of the association. Other officers elected at the four day conference were: William E. Zabel, jr., plant manager and treasurer, Zabel Brothers Co., Philadelphia, vice president, and J. Louis Landenberger, president, Ketterlinus Lithographic Mfg. Co., Primos, Pa., treasurer. Staff members reappointed by the board were Oscar Whitehouse, executive director and Robert L. Eger, secretary.

GPO Offset Department

Honorable Raymond Blattenberger, U. S. Public Printer, keynoted the convention discussions. According to Blattenberger, "the lithographic progress in the Government Printing Office has moved so expeditiously that we are a couple of years ahead of any schedule that might reasonably have been set for the Office, bearing in mind our degree of progress five years ago."

He added: "I know of no better way to demonstrate my faith in the future of lithography than to tell you that I have installed 21 new offset presses in the GPO. Today, as in the industry at large, lithography has invaded almost every class of printing being produced by the Government. We are now producing about 40% of our product by offset, making it possible to get along with 1000 less employees."

The lithographic industry cannot afford to stand still, Blattenberger asserted. Lithography is the work of many people whose knowledge has been put into a common pool from which all can draw, he concluded.

A panel discussion on *Web Offset —Its Present and Future* was headed by LNA Director Vernon K. Evans, president, Veritone Company, Chicago. Evans noted that "web offset is a mere youngster on the printing scene, but that web printing is a mighty giant, accounting for by far the greater volume of printing done on paper."

Web offset has problems, so does sheetfed offset, Evans said. But, he commented, the biggest mental block for most of us is in the finishing operations done right on the end of the press; our production, estimating and manufacturing departments will all resist this big step to a complete package at the end of the machine. It's hard for sheetfed people to accept the tempo of this change.

Olin Freedman, Graphic Arts consultant, Chicago, led off a panel of three speakers, who discussed technical and materials developments in web offset. Freedman observed that there were several thousand web offset presses in use in the U. S. and Canada.

Tracing the advantages of web offset presses, he mentioned that plate life, in terms of number of impressions, is longer and all types of plates used successfully on sheetfed presses are practical. He said that with all colors printed on both sides once through the press, fitting of colors is assured and quality, particularly dot structure, can compare favorably with the best sheetfed results.

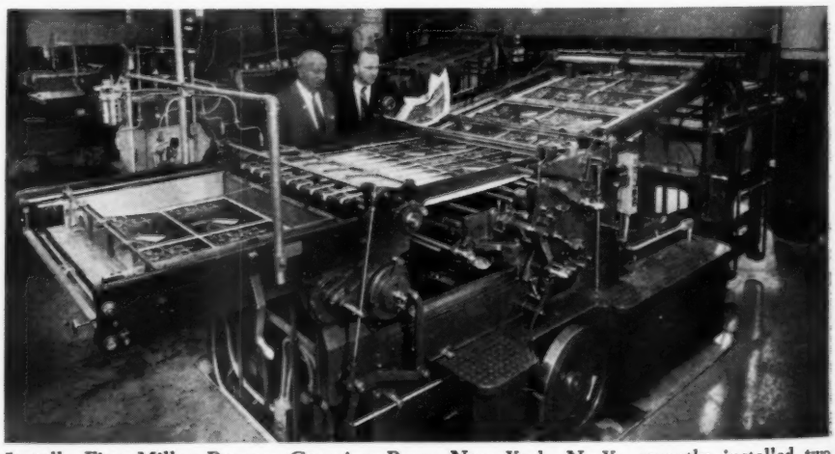
Another panelist, Kenneth L. Wallace, Kimberly-Clark Corp., said that web offset is recognized by the paper industry as a segment of the printing industry that is showing rapid growth in magazine publication, newspaper, encyclopedia, directory, catalogs, mailers, etc.

In a recent survey of the industry, Wallace found there "are in excess of 100 printers actively engaged in or contemplating expansion into heat set web offset printing." Web presses in use are consuming in excess of 50,000 T. of coated paper per year—although the bulk total tonnage of the total tonnage on web offset is still on uncoated type paper.

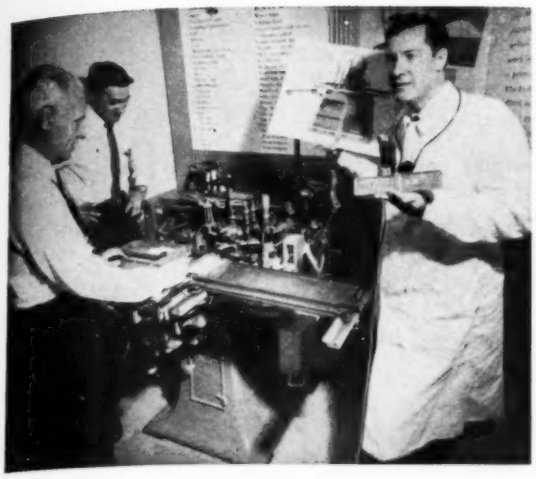
Wallace said that while most of the papers used to date on web offset are in the lightweight category (30 to 50 lb.) there is a growing demand for heavier weights of 60 to 80 lb. Speaking of the comparative cost of papers designed for web offset as opposed to letterpress, he said the difference "is due to the more costly raw materials used in offset papers to get the added qualities of water resistance, strength, stability, wet curl resistance, etc."

Comparisons of Quality

The third speaker on the web panel was T. A. Dadisman, Printing Developments, Inc., who discussed web selling problems. According to Dadisman, it is no longer necessary to debate or to defend the quality results of rollfed offset compared to roll fed letterpress where corollary press equipment is utilized.



Installs Five Miller Presses—Georgian Press, New York, N. Y., recently installed two Miller SY 27 in. by 41 in. single color presses, two Miller SW 21 in. by 28 in. single color presses, and one Miller TW 21 in. by 28 in. two color letterpress. Examining a press sheet beside a SY single color press are Georgian officials Saul Lehman, president, and Jesse Lehman, secretary-treasurer.



Monotype Exhibit at Grand Central—As part of a recent educational exhibit sponsored by American Smelting & Refining Co. in Grand Central Station, New York, N. Y., Lanston Monotype Co. had on display a Monotype caster in operation. The purpose of the exhibit was to demonstrate non-ferrous metals and their uses. John Barry, right, was demonstrator for Monotype.

He went on to say that such contest is also void between rollfed offset production and sheetfed production where low cost, "commercially acceptable color work" in mass volume is the nature of work desired.

Dadisman warned lithographers that setting up your first rollfed offset press, especially if it be a multicolor job, could very easily become a catastrophe. The speaker urged plant owners to make a scientific analysis of the company's preparedness and fitness for a move into web offset.

DRUPA Printing Show

(Continued from Page 25)

operation on a commercial color job throughout the show.

Offet was represented by many sheetfed presses, none of which appeared to be uniquely new. The Fruhwald and Jager exhibit showing a large, common impression cylinder, multicolor offset press was accompanied by the world's smallest four-color press, a sheetfed unit printing on a sheet about 15 in. by 22 in. One Swedish manufacturer had on display, a sheetfed perfector press, printing blanket-to-blanket and delivering folded signatures. This press is a relatively small sized unit intended for book printing of small editions.

Web Printing Presses

The large United States printer looking for new web presses might have been disappointed, but he would have found no lack of enthusiasm for web printing on the part of equipment manufacturers. Rotogravure web equipment was displayed by German, Italian, and Swedish manufacturers. Flexographic equipment for printing on film, foil and paper were in evidence, but there did not appear to be anything in them that is uniquely new.

Two manufacturers, both German, displayed rubber plate presses intended for quality printing of books and business forms. One press was equipped with cylinders utilizing the tympan sheet for holding plates, and with several novel operating features. The second press was equipped with magnetic cylinders designed to hold the new magnetic rubber plates developed and displayed by Edelstahlwerke in Germany. Rubber and flexible plastic plates received a lot of attention by many exhibitors, and one would gain the impression that they are more extensively used by European printers than by United States printers.

In the bindery operations area,

Hoe Wins APRA Award—A Certificate of Achievement from American Public Relations Assoc. has been awarded to R. Hoe & Co., Inc. Receiving the award from H. Walton Cloke, left, chairman of awards committee, is Joseph L. Auer, president of Hoe. Hoe received the award for its newspaper promotion activities including an ROP color fashion show and a movie, *Color Sells Everything.*

a French sewing machine, capable of operating at about 110 signatures per hr. was displayed. The same manufacturer showed his perfect binder using high-frequency heating for drying the adhesive. Two programmed paper cutters also drew large groups of visitors. These units permit operation of a paper cutter to preset positions automatically. For the smaller printer interested in perfect binding, or short run casebound operations, there were several machines, but there does not appear to be anything likely to supplant the equip-

(*Continued on Page* 96)

Lithographic Stripping

(Continued from Page 43)

Layouts play a most important part in pressplate production. A layout may graphically depict all or part of the following—gripper margins; bevel measurement of the press running the job; sheet size of the job; position of the work to be stripped; trim and bleed margins; die cutting margins; imposition of the pages for book work; head, gutter or outside margins of the book page; folding and scoring margins; sheet position laterally as well as horizontally on the plate; correct backup for sheetwise forms, for print and turn forms, for tumble sheet forms; setting on marks for surprints or patches; register marks; holes for pins where close registry occurs; and cutting marks where required.

Materials for Layout

Another material finding increased use in the industry is plastic or cellophane. This is used where repeat forms occur, as in the case of the layout for a book job of many pages. Should register be required plastic is used, otherwise the layout is drawn on cellophane. In either case the layout on plastic or cellophane is laid beneath a sheet of goldenrod. Using this as a guide the stripper strips his films to the goldenrod sheet. The same thing could be worked with a goldenrod layout, but two sheets of this material laid over each other make a strongly opaqued background to see the ruled guide lines through.

(*To Be Continued*)

Research Council Meeting

(Continued from Page 29)

sion into relief offset printing was unsuccessful, he said, but it led into another area. The new concept follows lithography closely in that all elements are on a single plate. He said that in their experimental work on direct printing from wrap-around magnesium plates, they had reduced makeready and preparation steps from twenty-four to seven. He added there was a need to follow the lithographic system of putting all elements together at the front end of the job.

The ANPA-Dow powderless etching process for magnesium plates was discussed by W. J. Frisch, Wright Company, Cambridge, Mass. He said the fast etch process alone won't reduce costs. It is due to carefully prepared copy that the camera department is able to increase its production.

Every operation, he added, should be viewed with the idea of eliminating hand work. At the Wright Company, he said they do not permit hand work on plates, but rather find it more economical to make the plate over again. Frisch's firm is now experimenting with four-color process magnesium plates, fully color corrected.

Both flat and curved magnesium plates are used at Marathon Div., American Can Co., Menasha, Wis., reported Robert H. Downie of that firm. He was critical of electrotypes because they won't always register; have soft edges so you can't keep a plate clamped on the press; have caliper variations.

Downie was enthusiastic about the results obtained at Marathon on curved magnesium plates. They found they could get the caliper and curve desired. Magnesium also offers lightweight and provides the hard edges needed for lockup on presses. Downie said they are getting good register and have reduced makeready moderately by using these plates. Pressmen don't always get good register, he commented, because they don't understand what is happening on the press.

Process for Copper Plates

Powderless etching of copper was described by William Bradley, Litho Color Corp., Atlanta, Ga. The process was developed at Georgia Institute of Technology under the sponsorship of Photoengravers Research, Inc.

Bradley said that etching of copper for color process work has always required much hand work. Researchers experimented with a system for automatic etching of copper. The object was not necessarily to save money or time, but to do a better job in the copper etching process.

The speaker reported 37 shops first put the process in operation, and 12 more since then have added it. He said some have experienced complete failure, but at least 20 plants are using it successfully. A few are having moderate success. The difference here, he thought, is in the men operating the process. Some of these craftsmen just don't care. Bradley said the development of the process is not yet complete. Some plants have not yet attempted combination etching.

Experience in etching of curved surfaces, using principally magnesium as the metal, was described by Floyd Lear, jr., Industrial Engraving Co., Easton, Pa. Lear's firm makes what is called Magnasleeves for the carton printing industry. He said the curved plates have shown superior results and in many cases have replaced electrotypes.

Industrial Engraving is now using the 11th variation of the Dow etching machine. He cited several advantages of magnesium as; Provides reduced makeready; there is no need to cut plates apart for register purposes; it resists smashes on press; can easily be handled by pressmen, and provides reduced shipping charges because of its lightweight.

In introducing powderless etched plates into a plant's operation, Lear advised that pressroom personnel must first be educated in their importance and how to use them. This is especially true for supervisors who are not familiar with this type of plate. He emphasized that printers must take time to learn about plates.

During the discussion period which followed, it was brought out that Master Sales and Service Corp. has developed the first model of a special machine for etching copper plates. (See Equipment and Supplies section in this issue.)

Troubles with Processes

Members of the audience wanted to know why the copper powderless etching process was successful in some plants and not in others. Bradley said that success of the process is due to the extreme care on the part of workmen. Frisch believes in many instances it is definitely a lack of communications with the operator.

John Davis, jr., Judd & Detweiler, Inc., Washington, D. C., wanted to know if there is a tendency for plates curved after etching to go out of register. Downie suggested it was unwise to curve the plate afterwards. Brooks & Perkins, Inc., which is working on the plate curving problem, is not bending the plate, but forming it with heat.

Another member of the audience inquired if magnesium becomes pitted or corrodes during storage. Downie said they don't pick up any corrosion in storage, but do get it

3M Lithographic Competition—Judges for Minnesota Mining and Mfg. Co.'s first quarter 1958 Excellence of Lithography Competition are shown selecting the winning entries. Left to right, the judges are: Gerald H. Lytle, Technical Trade School, Pressmen's Home, Tenn.; Henry C. Daniel, Litho Club of Atlanta (Ga.) and (kneeling) George F. Longino, jr., president, Printing Industry of Atlanta, Inc. Ten winners were picked from 1000 entries.

when the plate runs on the press. He said this was the fault of the ink.

Is there any correlation between etching machines for both copper and zinc? A. E. Powers, jr., Chemco Photoproducts, Inc., said that the same etching machine can be used for making both zinc and magnesium plates, but a different one has to be used for copper plates.

New Type High Standard

A new recommended standard for type high was among the important matters brought out in special reports to members of the Research and Engineering Council. The Composition Committee, headed by Alan S. Holliday, Craftsmen. Inc., Kutztown, Pa., proposed a permissible tolerance of minus zero and plus 0.001 in. from 0.918 in. for height of type and other release surfaces for letterpress printing. He reported 133 composing rooms had responded to a survey taken by the committee. He said the survey disclosed a lack of uniformity in the letterpress industry and urged all segments of the Graphic Arts to adopt and use standards.

Methods of handling magnesium and etching of photoengravings will be discussed in two separate reports which are currently being prepared by the Photomechanics and Platemaking Committee under the chairmanship of Dr. Marvin C. Rogers. Rogers also reported that future seminars are planned on color proofing, molded plates, and the art director and his relation to reproduction processes.

The printing committee under the leadership of William C. Walker, West Virginia Pulp & Paper Co. is also preparing several special reports for R&EC members. Topics will include moire patterns, printing pressures, paper testing, and static electricity. Walker said the industry was badly in need of more and better ways of measuring materials in printing. A special committee under Warren L. Rhodes, Rochester Institute of Technology, has been formed to cope with this problem.

Good progress in the improvement of bindery equipment was reported by Edd Shipley, Kingsport Press, Kingsport, Tenn., who was acting for Edward J. Triebe, same company, chairman of the Binding and Finishing Committee.

Groups Pose for Cameraman at Research Council Meet

TOP: Frank Schreiber, executive secretary, American Photo Engravers Assoc.; Walter T. Flower, Flower Steel Electrotype Co., New York, N. Y.; J. Russell Parrish, Meredith Publishing Co., Des Moines, Ia.; Charles Edson, Kable Printing Co., Mt. Morris, Ill.
BOTTOM: Ray Spiller, Harris-Intertype Corp.; W. Henry Seamans and Joseph E. Meyer, both of Cottrell Co.; and W. C. Roberts, Harris-Intertype Corp.

A report on the activities of the Engineering and Materials Handling Committee was handled by its chairman, C. M. Flint, Chas T. Main, Inc. Activities covered by this group include materials handling of work in process, lighting for color appraisal, illumination of production departments, safety code for signal devices, cleaners and solvents, maintenance painting, and mailroom problems.

'We've Got Problems'

We've Got Problems was the title of a discussion period which used up the balance of the time at one session. It was moderated by C. L. Jewett, Minnesota Mining & Mfg. Co.

What is being done to produce better linecasting machine slugs and better type faces, asked one R&EC member. Mergenthaler Linotype Co. reported there will be a gradual program of improvement with this in mind. Intertype Company said it will be an evolutionary change for improvement. A representative of a typesetting firm reported it had undertaken a study of type face quality. He said they could improve the face of type by increasing the tin content of the metal, but decided not to do this because metal sticks to the spacebands.

Ed Blank, then with Rogers Kellogg-Publishers Printing Corp., Long Island City, N. Y., and now with New York Employing Printers Assoc., said they had trouble with linecasting machine slug quality and found that if they had given careful attention to replacement and maintenance, the trouble would never have occurred. He advised setting up a daily schedule of machine maintenance and criticized the tendency of printers to always blame the supplier.

Holliday said his company feels the linecasting machine companies are not inspecting their matrices as closely as they should. He added that some firms are reporting trouble with new matrices.

The matter of communications between customer and printer provoked a number of comments. William Mariner, Case-Hoyt Corp.,

Rochester, N. Y., said they rarely receive two pieces of copy alike. Any standardization in this direction, he added, goes further than the art itself. Blank suggested the printer tell his customer just which way he wants the artwork. He acknowledged that this won't help, however, if the art is already prepared. Another comment was to the effect that it is the problem for the customer contact man to overcome. The printer may get stuck the first time, but he should gradually overcome the problem. One R&EC member said they hold meetings between the art and stripping departments which provide good results. The effort here is to try to pinpoint causes.

Frowns on Ink Standards

A suggestion was made that there is a need for standards in the selection of inks for four-color process. Michael Bruno, Lithographic Technical Foundation, said it would be a mistake to set standards for ink. It would be better, he thought, for the industry to work in the direction of improving present inks rather than standardizing.

The densitometer for use in control in photomechanical operations was strongly urged by Rogers. Frank Preucil, Lithographic Technical Foundation, said there is still a lot of mystery as to what is a densitometer. He said the simplest way to explain it is to regard it as a light meter for measuring differences in amount of light. If a printer's problem has anything to do with differences in color, then a densitometer will help. It is also finding wide use for measuring brightness of paper in pressrooms of printing plants.

Automation in the printing industry was another topic which was presented. Flint said it could be applied to almost any operation, but the question was "can you afford it?" He mentioned the Chicago *Sun-Times* as a good example of automation in the Graphic Arts.

Please take a look at your address on the wrapper in which PRINTING PRODUCTION is sent to you at your place of employment. If it isn't correct, please tell us about it on the special postcard found in this issue.

Graphic Arts Exposition Space Sold Out

The total 237 booths have been allotted to 175 concerns who will exhibit their products and services at the Seventh Educational Graphic Arts Exposition, to be held at the Coliseum, New York, N. Y., Sept. 6-12, 1959. A. E. Giegengack, president and general manager of the Exposition, has announced all space 100% sold. The entire exhibition area on both the first and second floors of the Coliseum totals 90,000 sq. ft.

Names of exhibitors who have met all requirements of the Exposition management are:

Aigner, G. J., Co.
Amalgamated Lithographers of America
American Evatype Corp.
American Printer & Lithographer
American Speedlight Corp.
American Steel Chase Co.
American Type Founders Co., Inc.
American Wood Type Manufacturing Co.
Amsterdam Continental Types & Graphic Equipment, Inc.
Anchor Chemical Co., Inc.
Andy, Mark, Inc.
Appleton Machine Co.
Atlas Stencil Files Corp.
Azoplate Corporation

Bauer Alphabets, Inc.,
Bauer Presses, Inc.
Baum, Russell Ernest, Inc.
Bingham Brothers Co.
Bingham's Sam'l., Son Mfg. Co.
Book Production Magazine
Bourges Color Corp.
Brackett Stripping Machine Co.
Brandtjen & Kluge, Inc.
Brown, W. A., Co.
Bunn, B. H., Co.

Carnegie Institute of Technology
Challenge Machinery Co.
Champlain Company, Inc.
Chandler & Price Co.
Chemco Photoproducts Co., Inc.
Consolidated Intl. Equipment & Supply Co.
Craftsman Line-Up Table Corp.
Crawley Book Machinery Co.
Crosfield Electronics Inc.

Dayton Rubber Co.
Dexter Publications
Didde-Glaser, Inc.
Di-Noc Chemical Arts, Inc.
Doyle, J. E. Co.
DuPont, E. I., de Nemours & Co., Inc.
Dutro, Orville, & Son, Inc.

Eastman Kodak Co.
Education Council of the Graphic Arts Industry, Inc.
Embossograph Process Co., Inc.

Fairchild Graphic Equipment, Inc.
Falco Corporation
Filmotype Corporation
Force, Wm. A., & Co., Inc.
Foster Manufacturing Co.
Fototype, Incorporated
Friden, Incorporated

Gaebel, Arthur H., Inc.
Gane Brothers & Co., of New York, Inc.
Gane Bros., & Lane, Inc.
Gast Manufacturing Corp.
Gegenheimer, William, & Co., Inc.
General Binding Corp.
Gibson Machine Mfg. Co.
Graphic Arts Employment Service
Graphic Arts Publishing Co.,
(*Graphic Arts Monthly*)

Hamilton Manufacturing Co.
Hamilton Tool Co.
Hammermill Paper Co.
Hammond Machinery Builders
Hantscho, George, Co., Inc.
Harris-Intertype Corporation
Harris-Seybold Company
Macey Company
The Cottrell Company
Lithoplate, Incorporated
Intertype Company
Heidelberg Eastern, Inc.
Heller Roberts Mfg. Co.
Herbert Products, Inc.
Hewson Company, Inc.

Ideal Roller & Mfg. Co.
Inland Printer
Intl. Assoc. of Electrotypers & Stereotypers, Inc.
Intl. Assoc. of Printing House Craftsmen, Inc.
Intl. Printers Supply Salesmen's Guild
Intl. Typographic Composition Assoc., Inc.

Kenro Graphics, Inc.
Kimberly-Clark Corporation
Kleen-Stik Products, Inc.
Korn, Henry P.

Lanston Monotype Co.
Leiman Bros., Inc.
Lithographic Technical Foundation
Lloyd Associates, Ltd.
LogEtronics Inc.
Ludlow Typograph Co.

MacBeth Arc Lamp Co.
Mergenthaler Linotype Co.
Davidson Corporation
Miehle-Goss-Dexter, Inc.
The Miehle Company
The Goss Company
The Dexter Company
The Lawson Company
Mercury Engineering Corp.
Miller Printing Machinery Co.
Miller-Lauffer Printing Equipment Corp.
Minnesota Mining & Mfg. Co.
Mohr Lino-Saw Co.
Monomelt Company, Inc.
Moore, Kenneth J., & Co.
Moreland Corporation
Morrison Company
Mosstype Corporation
Murray Engraving Co.

National Assoc. of Printing Ink Makers
National Bundle Tyer Co.
National Lead Co.
New Era Manufacturing Co.
Graeber Stringing & Wiring Machine Co. Div.
Nolan Corporation
Nu Arc Company, Inc.
Nygren-Dahley Company

Offset Duplicator Review
Ortman-McCain Company
Oxy-Dry Sprayer Corp.

Parsons & Whittemore Graphic Corp.
Pate Company
Perma-Flex Industries Ltd.
Perma-Flex Roller Corp.
Photon, Incorporated
Pitman, Harold M., Co.
Pittsburgh White Metal Co.
Pneuma-Flo Systems, Inc.
Portland Company
Potdevin Machine Co.
Printing Industry of America, Inc.
Printing Machinery Co.
Printing News, Inc.
Printing Production Magazine
Printing Trades Blue Books
Puglisi-Dutro, Incorporated

Rapid Roller Co.
RBP Chemical & Supply, Inc.
Regency Thermographers
Repro Graphic Machines, Inc.
Research & Engineering Council of the Graphic Arts Industry, Inc.
Robertson Photo-Mechanix, Inc.
Rochester Institute of Technology
Rosback, F. P., Co.
Rouse, H. B., & Co.
Royal Zenith Corp.
Rudow, William B.
Rutherford Machinery Co.
Div. Sun Chemical Corp.

Schaefer Machine Co.
Scheinker, Ilya, Mechanical Engineering
Schriber Machinery Co.
Screen Process Printing Assoc. Intl.
Seal-O-Matic Machine Mfg. Co.
Sheridan, T. W. & C. B., Co.
Simco Company
Smyth Manufacturing Co.
Southworth Machine Co.
Stanford Engineering Co.
Star Parts, Incorporated
Strong Electric Corp.

Thompson-National Press Co., Inc.
Ti-Pi Company
Tirfing Printing Machinery, Inc.
Transkrit Corporation
Typefounders, Incorporated

Vacuumatic North America, Inc.
Vandercook & Sons, Inc.
Verner, B., & Co.
Virkotype Corporation

Walden Sons & Mott, Inc.
Walton Laboratories
Weber, Martin J., Studio
Weco Trading Co.
Western Newspaper Union
Wetter Numbering Machine Co.
Wild & Stevens, Inc.
Williamson & Company, Inc.

Zimmer Printers Suply Co., Inc.

ATTENTION ALL STEREOTYPERS

MORE AND MORE STEREOTYPERS ARE FINDING OUT THAT THE "LANGITEX 9000" CORK MOLDING BLANKET IS FAR SUPERIOR TO ANY THAT WAS EVER MADE. PROOF LIES IN THE PRINTED REPRODUCTION AND IN THE QUALITY OF THE MATERIAL WHICH IS:

UNIFORM WEIGHT
UNIFORM DENSITY
UNIFORM THICKNESS
all which give
UNIFORM MATS

THIS MONTH ONLY: WITH EVERY ORDER FOR FIVE BLANKETS WE WILL SHIP YOU ONE EXTRA BLANKET FREE—BUY FIVE, GET SIX. MONEY REFUNDED IF YOU ARE NOT FULLY SATISFIED WITH THE PERFORMANCE OF THE "LANGITEX 9000" CORK MOLDER

KEEP YOUR DEPARTMENT COST DOWN BY USING THE "LANGITEX 9000" CORK MOLDER

1/8"	3/16"	1/4"	5/16"	3/8"
$5.20	$6.40	$7.85	$8.90	$10.50

WE SELL DRY MATS

QUANTITY DISCOUNTS

5 - 14 10%
15 - 24 15%
25 - 99 20%
100 or more 30%

MOLDS UNIFORM MATS

UNIFORM CORK THICKNESS & WEIGHT

EXCLUSIVE AUTHORIZED AGENT
distributed and sold by

A. P. S. INC.

American Publishers Supply, Inc.

P. O. Box 421 Lynnfield, Mass.

For More Information Circle 8 on Reader Service Card

EQUIPMENT & SUPPLIES

More Equipment & Supplies items start on page 8

Odor-Free Adhesive

A series of odor-free adhesives for bonding aluminum foil to paper and board stocks has been made available by Morningstar-Paisley, Inc. Laminations produced with the adhesive, known as Foylam, are said to withstand extreme heat, freezing, and wet conditions and are adaptable to a variety of packaging requirements. Circle No. 271 on Reader Service Card.

Offset Plate and Film File

An offset plate and film storage system with record and file control has been reported by nuArc Co., Inc. Called File-O-Matic, the system is available in several different units: Cabinets, wall bracket, hanging brackets, and floor dollies. All units are of steel construction with silver hammerloid finish. Cabinets are available to accommodate 10 in. by 16 in., 17 in. by 22 in., and 14 in. by 20 in. plates, in 100 and 200 hanger models. Wall brackets and hanging brackets each have 100 hangers; 200 hangers are available on the floor dollies.

According to nuArc, cabinets can be stacked three high to conserve space. The 10 in. by 16 in. model requires floor space of 20½ in. by 12 in. while the 17 in. by 22 in. cabinets require 20½ in. by 22 in. floor space. The circular illustrations show the File-O-Matic system, utilizing adhesive-backed cards and numbered hangers. Circle No. 269 on Reader Service Card.

Portable Dehumidifier

A portable room dehumidifier said to remove 2 gal. to 3 gal. of water from the atmosphere every 24 hrs. has been introduced by Suttle Equipment Corp. Called Atmo-Dry, unit is equipped with a removable rust proof drawer which can be easily emptied, states Suttle. A permanent drain can also be installed so that no attention is necessary. An automatic humidity control, manufactured by Minneapolis-Honeywell, may be used with dehumidifier to turn it on or off at a preset desired dryness. Unit is recommended to control excess moisture, prevent mildew and protect equipment from excessive humidity. Circle No. 251 on Reader Service Card.

Polyethylene Storage Tank

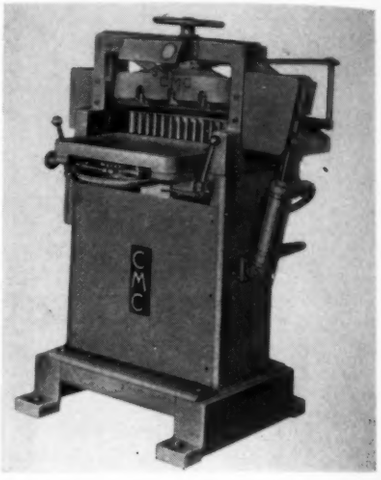
American Agile Corp. has introduced a 10 gal. polyethylene tank claimed to eliminate corrosion problems when storing etching solutions. Made of linear polyethylene, tank measures 12 in. wide, 12 in. deep and 18 in. long. Circle No. 257 on Reader Service Card.

Waste Container

A waste container known as the Waste Mobile has been introduced by Walton-Marsh. Container consists of a four or six bushel bag suspended from a light weight steel tube frame on full swivel 3 in. rubber casters. Features include self-locking steel brackets to prevent frame collapse during use, nylon washers at pivot points, and six two-way hooks that support the bag and cleaning accessories. Unit is said to fold for storage purposes. Each bag is equipped with two strap handles for lifting the bag. According to manufacturer, bags are available in vinyl plastic for wet waste or denim for ordinary waste. Circle No. 268 on Reader Service Card.

Craftsmen Paper Cutters

A new line of manual and hydraulic paper cutters has been introduced by Craftsmen Machinery Co. A maximum cutting width of 19½ in. is provided on the automatic, semi-automatic, and lever operated models in the line. Automatic model features hydraulic control of knife and paper clamps. According to the manufacturer, the knife has a cutting speed of two seconds and is capable of cutting a 3 in. lift of paper. Adjustable clamp pressure is indicated by a gauge at one side of the machine. Safety features include two-hand operating controls, knife bar safety lock, and two steel handles for removing and adjusting the knife.



Semi-automatic model (illustrated) consists of a hydraulic powered knife and hand operated paper clamp. It is similar to the fully automatic unit in other details according to manufacturer.

Lever model, which is manual, cuts a 2½ in. lift. It includes a two-hand safety device and an optional steel stand. Circle No. 267 on Reader Service Card.

Lucikon Layout Table

The Lucikon opaquing, stripping and layout table equipped with four sided chromed steel straight edge adjustments, allowing operator to work from any side of the table, has been announced by M. P. Goodkin Co. Other features include floor leveling adjustments, two recessed storage shelves, work shelf to hold supplies and three fluorescent tube illumination. A special coating on the 22 11/16 in. by 33 3/16 in. glass area is said to eliminate glare and enable operator to work over a smoothly lighted surface. Unit operates on 110 a.c., v. Circle No. 259 on Reader Service Card.

Teletypesetter Spaceband

The availability of a spaceband for use on wire service Teletypesetter composition has been announced by Star Parts,

Inc. Spaceband, which has been designed primarily for news service tape operation, can also be used for general composition. It has a size range of 0.037 in. to 0.124 in. Circle No. 270 on Reader Service Card.

Solenoid-Operated Lubricator

The Type E solenoid operated lubricator which can be used to oil up to 20 average bearings is available from Bijur Lubricating Corp. Either a 3 pint or 6 pint reservoir may be used on the unit. With the larger reservoir, automatic warning systems sound when oil supply is low. Circle No. 289 on Reader Service Card.

Offset Plate Graining Machine

A specially designed brushing machine for graining and regraining aluminum and zinc lithographic plates has been announced by the Machine Division, Fuller Brush Co. It is said machine imparts on plates a uniformly fine grain, removing practically no metal from the surface of the plate in the process.

According to Fuller, fine grain produced reduces the amount of water required in the press and the uniformity in grain minimizes water control problems.

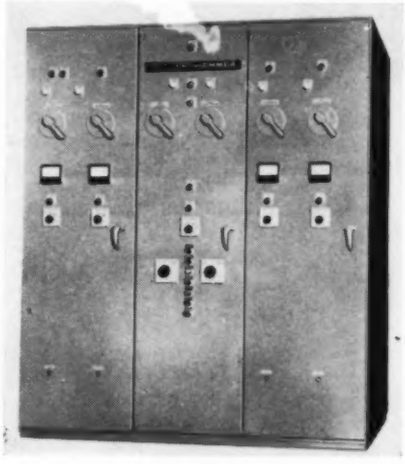
A pumice and water solution is pumped onto the flat sheets as they are conveyed through the machine by means of rubber covered feed rolls. Two cylindrical brushes pumice scrub one side of the plate, while a third brushing station scrub rinses both sides. The plate then passes through an air squeegee which dries both sides.

It is claimed full sized new aluminum plates can be grained within 2 min., while zinc surface plates may be regrained in three passes in less than 5 min. New metal does not warp after graining and the plates remain as flat after processing as they were prior to graining, states Fuller. Circle No. 250 on Reader Service Card.

Webmaster Unit Press Drives

Cutler-Hammer, Inc. has announced the development of two new unitpress drives, the a.c. Webmaster and the d.c. Webmaster. Press drives consist of three basic components, the supervisory control, individual unit controls, and the unit selector panel.

Supervisory control and unit controls are housed in one enclosure with front and rear doors for maximum accessibility.



Unit selector panel has its own enclosure and may be placed anywhere in the plant. It is claimed any combination of press units and folders can be accommodated by the Webmaster. Unitization feature of the drives provides for future expansion without redesign or replacement of the original installation.

Webmaster is equipped with press set up lights, self-contained electrical braking, and a safety reset signal system. It is said drive enables complete coordination with the delivery conveyor systems. Circle No. 255 on Reader Service Card.

Angle Gauge for Saws

A device for cutting material at any angle up to 45 deg. on a standard composing room saw has been produced by V. C. Shidler Products. Gauge is placed on copy, adjusted to correct angle, and transferred to saw where material placed against gauge will be cut to an angle complementary to angle of the copy. Metal strip material and stereotype or wood base may be used with the gauge according to manufacturer. Circle No. 280 on Reader Service Card.

Harris Offset Job Press

A new single color offset job press is now being manufactured by Harris-Seybold Company, Div. Harris-Intertype Corporation. Harris Model 126 has a maximum sheet size of 20 in. by 26 in. and a minimum of 9 in. by 12 in. Size of press is said to enable multiples of 6 in. by 9 in., 8½ in. by 11 in., and 9 in. by 12 in. with bleed, to be produced.

Model 126, which is the smallest press in the Harris line to offer feed roll register, is equipped with a simplified center separation feeder, graduated scales to aid in positioning stock and side guides, stream or single sheet feed, and an electronic trip effective on the complete stock range.

Accuracy of register is said to be maintained through an on-the-fly side guide adjustment, feed rolls, and corrugating bar. Accuracy is also maintained by a key register system built into the press, which, when used with a key register punch, is said to assure optimum register from layout to printed sheet.

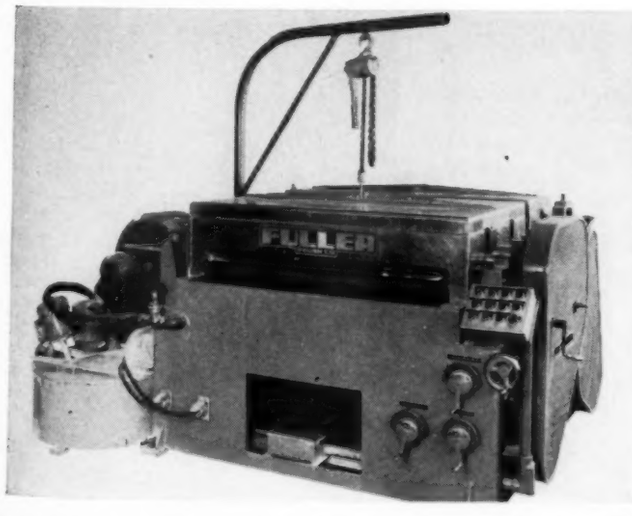
Maximum printing area is 19⅝ in. by 25½ in. and is given full coverage by an inking system consisting of five vibrating rollers and four form rollers, said to provide thorough ink break-up and distribution.

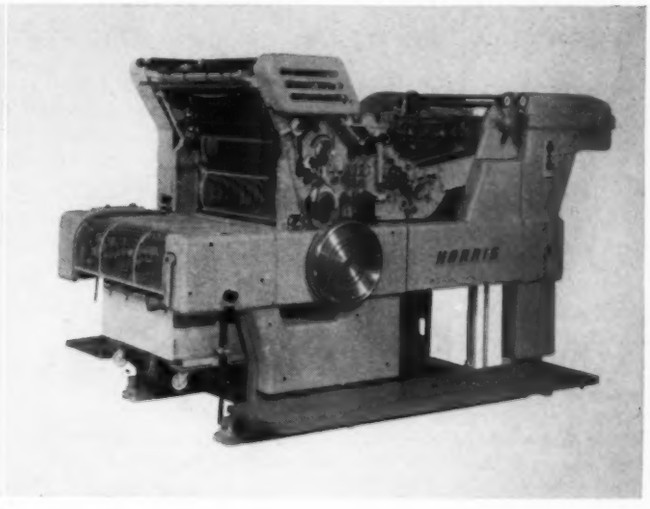
Dampening system includes a roll-back fountain and an infinitely variable water ductor.

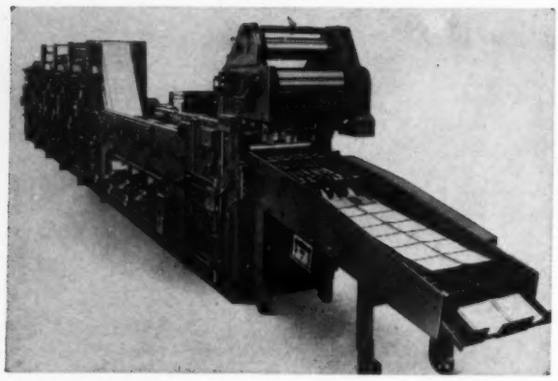
Maximum speed, 8000 sheets per hr.; approx. net weight, 7000 lbs.; floor space, 6 ft. 10 in. by 10 ft. ⅝ in. Circle No. 274 on Reader Service Card.

Fuller Brush Co.'s specially designed brushing machine for graining and regraining aluminum and zinc lithographic plates is pictured at left. It is said fine grain produced on machine reduces amount of water required in the press and the uniformity in grain minimizes water control problems.

At right is Harris-Seybold's new single color offset job press which will handle stock sizes from 9 in. by 12 in. through 20 in. by 26 in. at rated speeds up to 8000 i.p.h. Features are said to include simplified center separation feeder and graduated scales that help position stock and side guides.







Webfed dry offset perfecting press manufactured by Hamilton Tool Co. The 17 in. by 25 in. press, designed mainly for business forms production, is shown delivering snap-out forms.

Dry Offset Perfecting Press

Hamilton Tool Co. has introduced a 17 in. by 25 in. dry offset perfecting press for snap-out and continuous business forms production.

Press processes five webs simultaneously utilizing three perfecting units and two face printing units, and can produce forms which are printed, punched, numbered, perforated, slit, and collated with carbon paper as required. Forms are cut off, counted, and delivered as snap-out forms or zig-zag folded and delivered as continuous forms.

Paper in-feed, web tension, and numbering controls are electronic and automatic. Registration is accomplished by remote control push button. Gluing is said to be selective and metered. Trim gathering and disposal unit is built-in. According to manufacturer, operating speed exceeds 400 web f.p.m.

Delivery unit consists of an 8½ in. and 17 in. cut-off machine for snap-outs, and an 8½ in. zig-zag folder for continuous forms. Circle No. 287 on Reader Service Card.

Dot Etch Table

Leedal, Incorporated has introduced its newly designed dot etch table equipped with unbreakable, light diffusion material which permits the top to be clear glass for easy replacement if broken. Material

is said to give an even light diffusion over entire working surface. Spray pipe at top allows water to run over entire working area and splashwalls on back and sides prevent dripping on floor. Top is tilted 150 deg. for right working angle. Other features include adjustable feet and accessible fluorescent tubes. Tables are available in sizes from 21 in. by 25 in. to 41 in. by 51 in. Circle No. 290 on Reader Service Card.

Rotating Water Union

Roms, Incorporated has announced the development of a rotating water union for use on high speed printing presses utilizing water as a coolant. Manufacturer states that flame coated ceramic seats virtually eliminate corrosion. Ac-

cording to Roms, the union can be adapted to all high speed press rollers and drums. Unit is available in single and double flow types with ½ in., ¾ in. and 1 in. pipe thread or 1 in. machine thread. Circle No. 264 on Reader Service Card.

Fluorescent Inks

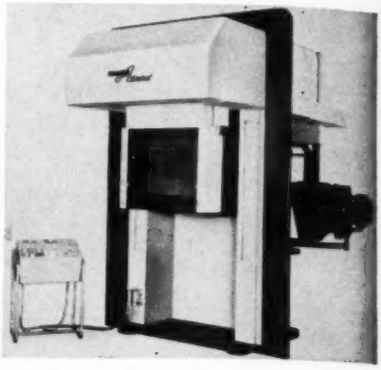
A line of Day-Glo fluorescent inks for each major printing process has now been made available by Switzer Brothers, Inc. The brilliant colors are also available on Day-Glo papers by Crocker, Burbank, Calif. Circle No. 262 on Reader Service Card.

Static Measuring Device

A redesigned static detecting device which can be used for quantitative measurement of static charges occurring in product or process flows has been announced by United States Radium Corp. Called the Ionostat, instrument is capable of measuring charges of any magnitude, and measurement parameters extend from 5 v. to infinity, report company officials. Device is equipped with an adjustable iris diaphragm which is claimed to reduce maintenance requirements and enable simplicity in operation. Ionostat measures 11 in. by 9 in. by 3½ in. and weighs 4 lbs. Circle No. 258 on Reader Service Card.

New Klimsch Camera

Klimsch & Co.'s Admiral 20 in. by 24 in. camera is designed with camera back, lens-holder and transparency holder suspended from a horizontal overhead bed while copyholder travels vertically. The unit is handled in this country by Repro



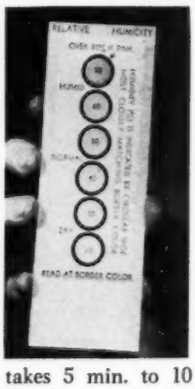
Graphic Machines Inc. Automatic focus for three lenses, electrical change of lenses, mirrors, filters and diaphragm are other features of the camera. It is also furnished with separate copyholder and transparency holder with ±45 deg. oscillation. Circle No. 276 on Reader Service Card.

Chrome Plating Machine

The B-75 Chromplater machine which can be used by stationery engravers to chrome plate copper or steel dies has been introduced by Dawson Corporation. It is reported engravers can have a perfect chrome faced die ready for use in 10 min. with the machine. Unit is sold complete with the plating solution. Circle No. 278 on Reader Service Card.

Humidity Indicating Device

Andrew Technical Supply Co. has announced a humidity indicating device known as Humigraph. Device consists of



a 2 in. by 6¾ in. card furnished with seven indicator spots whose color changes from blue to pink as the atmospheric humidity changes. Card is scaled to show relative humidity by reference to the color change spots. It reads from 10% to 80% relative humidity. According to Andrew, it takes 5 min. to 10 min. for card to respond to small changes in humidity, and about 30 min. to respond to a humidity change as much as 40%. Circle No. 252 on Reader Service Card.

Venus Regular Typeface

Bauer Alphabets, Inc. has announced its regular series of Venus family, which matches the already available italics. Venus regular is offered in four weights,

Venus Medium

Venus Bold

light, medium, bold and extrabold. The Venus extended and condensed series are also available. Specimens are offered. Circle No. 253 on Reader Service Card.

Bending Steel Rule Dies

J. A. Richards Co. has introduced its No. 6 hydraulic bending machine which can be used in carton and container plants for making steel rule dies. Pump is controlled by a thumb operated switch

and is driven by a 1½ h.p., 110 v. motor to provide bending pressure. Rating is up to 7000 lbs. at the bending tools. Forward or reverse action is obtained by depressing or raising the control handle. An adjustable hand lever positions the dies for correct gap to match a given material thickness, or for various radii without need for die change within the limits of the dies being used, reports Richards. Circle No. 291 on Reader Service Card.

Develops New Metal Compound

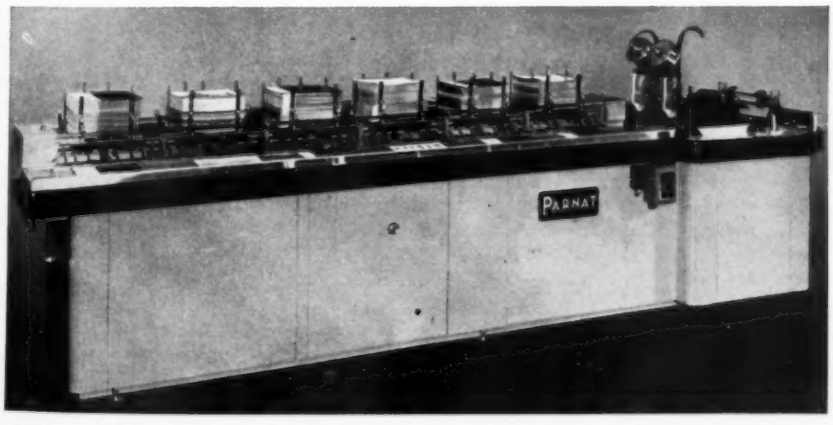
Jetype, a metal compound which can be used to cast display type composition on slugs up to 48 picas long in type sizes up to 3 in. high, was introduced by Rudge Associates, Inc. at the recent ANPA Mechanical Conference at Atlantic City, N. J. The metal is said to be rigid, yet has only one fourth the weight of lead.

The metal compound is used in conjunction with a specially-developed Jetype display caster. Jetype is put in a hopper and used by the machine in granular form. It is injected by hydraulic ram at a temperature of 350 deg. F. at high pressure. The casting machine occupies a floor space of 32 in. by 36 in. According to Rudge, no burnishing is required to get reproduction proofs of high quality. It is claimed the face is clean, edges sharp and durable, and the material has a fine affinity for ink. Jetype will stand up under molding pressure and long press runs, states Rudge. Material is reusable.

Jetype metal can also be used in typesetting machines when the present crucible is replaced with a simple conversion unit, reports Rudge. It is said speed of the machine can be increased without back squirts and other metal troubles. Leads, slugs, rules, base materials, and furniture can be made from the metal. Circle No. 292 on Reader Service Card.

Aluminoid Proof Press

A proof press made of Aluminoid has been introduced by Triumph Equipment Engineers. Aluminoid is said to be the lightest metal known, yet is claimed to be strong as iron. Triumph proof presses are available in three models, including a job proof press for full length galleys and one for full page newspapers. Circle No. 260 on Reader Service Card.



Collating, Stitching, Folding Machine—Parnat Business Machines Corp. recently introduced a machine that can be used to collate, saddle stitch and fold automatically in a single operation. It is said machine can produce all types of booklets, catalogs, and magazines, in sizes ranging from 3 in. by 5 in. to 9 in. by 12 in., either with single sheets of any type and weight of paper, or signature. It can be adapted to any number of stations and will produce up to 5000 units per hr., reports Parnat. Machine is equipped with bottom delivery claimed to enable continuous loading without interrupting production. Circle No. 277 on Reader Service Card.

books

Electro-Stereo Handbook

A profusely illustrated 32-page book describing the manufacture and use of duplicate letterpress printing plates has been published by the Intl. Assoc. of Electrotypers and Stereotypers, Inc. The publication, *Electrotype and Stereotype Handbook*, is a revised and re-edited edition of the original booklet published by the organization.

The publication is divided into three parts which cover: (1) Effective use of duplicate plates in letterpress; (2) How electrotypes are made and (3) Manufacture of stereotypes, plastic and rubber plates.

The concise manner in which the book is written, coupled with easy to follow sketches and illustrations, makes it a handy guide for anyone desiring a basic understanding of the duplicate plate field.

The Electrotype and Stereotype Handbook —A 32-page booklet consisting of illustrations accompanied by descriptive text; measures 6 in. by 9 in.; two color paper cover. Individual copies are free upon request, while larger quantities are furnished at 15 cents per copy. Firm names will be imprinted on quantity orders at imprinting cost. May be ordered from Intl. Asoc. of Electrotypers and Stereotypers, Inc., 758 Leader Bldg., Cleveland.

52nd Penrose Annual

A recent arrival from England is the artistically designed and skillfully produced *52nd Penrose Annual*. Nearly 100 individuals, groups, and organizations participated in the preparation of this colorful publication.

Technological developments in the Graphic Arts over the past few years are surveyed in a section of the book entitled Editorial Notes. Present progress and future possibilities of the various developments are given strong consideration. Among the subjects discussed are powderless etching, tone correction, color, electronics, and engraving.

Articles comprising advertising art, typography, type designing, management training, and various other areas of the Graphic Arts are presented in a section devoted to general topics. One of the 16 separate divisions of this section which should prove useful is a Graphic Arts book list giving publisher, date of publication and price of a number of significant Graphic Arts publications.

The technical section of the volume consists of 16 articles dealing with such subjects as: Bank note engraving, web offset color printing, ROP color, electronic color correction, nylon printing plates, and printing quality. Four of the articles appearing in this section were

written by technical men from the United States, including James W. Marshall and Warren L. Rhodes, Rochester Institute of Technology; Frank Preucil, LTF; John J. Rheinfrank and Philip F. Kurz, Battelle Memorial Institute; Frederick C. Myers, U. S. Engineer Research and Development Laboratories, and Robert M. Leekley, Time, Incorporated, Springdale Laboratories.

A number of colorful line illustrations and process reproductions are found in an Illustrations of the Year section of the book. Lithography, gravure and letterpress are represented in the samples. Examples of six color reproductions by letterpress and lithography are also included.

Color has not been spared in the advertisement section, where several full color reproductions appear. A number of interesting layouts and designs are also found in this section.

The Penrose Annual—52nd edition, 1958. Edited by Allan Delafons. Measures 8½ in. by 11¼ in.; 138 pages of text with nearly 100 pages of inserts and 50 pages of advertisements; hard bound, brown cloth cover. Price $11.50 per copy. May be ordered through PRINTING PRODUCTION, 1276 W. Third St., Cleveland 13, O.

Printing Ink Handbook

Meeting a need long recognized by many in the industry, the printing ink user now has a reference book that will enable him to examine the manufacture and ingredients of the ink he uses. The second book in a series on printing inks, *Printing Ink Handbook,* is being distributed to trade schools, ink suppliers and ink users through the National Assoc. of Printing Ink Makers. The first book in the series, *Printing Inks of Today,* was published in 1950.

The book attempts to tell what printing inks are, what they are made of, what they will do, what they will not do and how to correct some of the more common errors and faults. Pictures and graphs are used to more clearly illustrate ink making, mixing and usage.

The 60 page book consists of 15 chapters including: History of inks; methods of manufacture; ingredients; fitting ink to stock and press; special classes of inks; black inks, and lithographic inks and their uses. Inks for flexography and rotogravure; printing ink troubles; ink mixing and color matching; color theory; rollers; ordering, estimating and handling, and printing ink terms are also discussed.

The book was prepared by the Technical and Educational Committees of the National Assoc. of Printing Ink Makers assisted by the National Printing Ink Research Institute of Lehigh University, Bethlehem, Pa.

Printing Ink Handbook—Book consists of 60 pages including illustrations; measures 8½ in. by 11 in.; paper cover. May be ordered from National Assoc. of Printing Ink Makers, Inc., 1440 Broadway, New York 18, N. Y.

Offset Stripping

A comprehensive text and reference book dealing with black and white offset stripping is the latest publication of the Lithographic Technical Foundation. *Offset Stripping Black and White,* No. 507, is a completely revised edition of the original book published by LTF in 1945. Author of the revised edition is Bernard R. Halpern.

The book is comprised of 14 chapters, each dealing with a separate phase or application of stripping. Some examples of chapter content are: Job planning, stripping procedure, stripping operations, inspection and proofing, photographic expedients, and specialized applications. Basic mathematics as well as basic drafting and layout are also covered.

Generously illustrated with diagrams and photographs which clarify points discussed by the author, the 384-page book should find acceptance among apprentices and journeymen as well. A detailed table of contents coupled with a complete index facilitates the location of specific information. Also included is a glossary of terms and several tables.

Offset Stripping Black and White—By Bernard R. Halpern. Book consists of 384 pages, 165 figures, and 7 tables; measures 5½ in. by 8½ in.; paper cover. May be ordered from Lithographic Technical Foundation, 131 E. 39th St., New York 16, N. Y. Price to LTF members, $3.18 per copy; nonmembers, $10.40 per copy.

LIKE MAGIC
NOLAN
NOLAN
You don't have to be a magician to appreciate the time-saving and convenience features of this equipment. The performance is like magic. You can load 600 lbs. of metal in 30 seconds. It's push button loading and no hand ladling. The Nolan Remelter melts a full pot in less than two hours . . . additional loads in one hour. Save time-cut costs. Write for complete information. No obligation. Nolan will custom design to fit your requirements.
NOLAN Corporation
Rome, N. Y.
KEEP ROLLIN' BUY NOLAN

For More Information Circle 132 on Reader Service Card

PRINTING INDUSTRY PATENTS

Covering patents issued April 1, 8, 15, 22 and 29.

All new patents for the Graphic Arts are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc. presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

TYPESETTING MACHINE

A feature is the construction of the magazines for the type and type spacers or wedges. These magazines are a series of coaxial rings of like diameter. The rings are radially slotted to receive and accommodate the type and type spacers or wedges. The slots are so arranged in the rings and the type and type spacers or wedges are so positioned in the slots that the greatest number of individual pieces of type are accommodated. Patent 2,830,820 by Blackwell K. Murchison.

PHOTOCOMPOSITION MACHINE

This is a verstaile keyboard operated machine for photocomposition of text lines on film. Variations in type style may be quickly adapted from the keyboard. The product is a film complete in character spacing, line spacing, and justification. Patent 2,831,410 by Lester M. Walden.

PRINTER'S QUOIN

This quoin utilizes cheaper materials in parts not subject to heavy strain. The rack bar is separate from the slides. It is made of tool steel, while the slides are cast of low grade steel. A simple hook connection between the two parts is easy to make and assemble. Patent 2,831,654 by James E. Lee, James W. Lee, and Freeman Barney, assigned to The Challenge Machinery Co.

JUSTIFYING TYPEWRITTEN COPY

This apparatus is useful in justifying an automatic typesetting system. A direct reading register shows cumulatively the total number of set type space units utilized in a line being typed on a typewriter. Patent 2,830,763 by Blackwell K. Murchison.

Platemaking:

PLATE ETCHING METHOD

The plate constitutes a base metal on which one thin metallic layer of dif-

OVER 1600 NEWSPAPERS

ORDER FROM EASTERN

The name EASTERN has become a byword in the composing rooms, stereotype departments, press rooms and photo-engraving departments of the nation's finest newspapers.

Men who know and work with newspaper printing supplies and equipment in every category, rely on EASTERN for quick, dependable service in filling and delivering their orders.

The EASTERN Catalog 20 illustrates and describes over five hundred items to meet practically every production need. It's the most handy reference and complete source of supply in the industry. It pays to keep it at your fingertips!

MAKE YOUR NEXT ORDER EASTERN!

ENS EASTERN FOR ECONOMY

EASTERN NEWSPAPER SUPPLY, INC.

96-03 NORTHERN BLVD., CORONA 68, NEW YORK

For More Information Circle 55 on Reader Service Card

ferent chemical composition is deposited. The etching technique used prevents undercutting of the resist so that a sharply etched pattern is obtained. Patent 2,829,-460 by Marcel J. E. Golay.

METHOD FOR PRODUCING A PRINTING PLATE

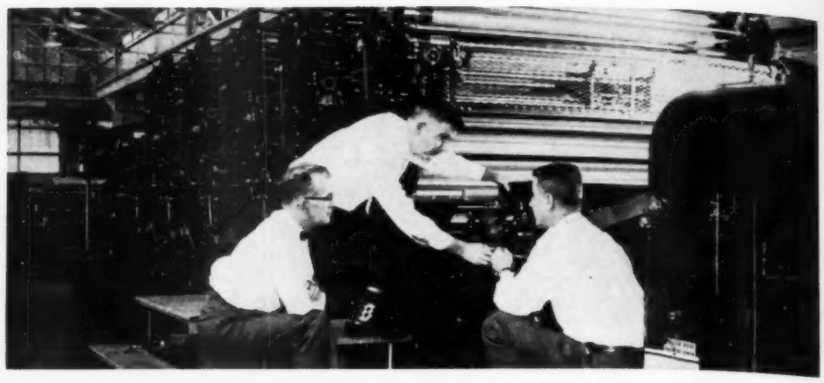
Invention is based upon the discovery of a method for producing light sensitized polyvinyl alcohol resins on metal plates, which method includes, prior to the application of a hardening bath, a treatment that increases the resistance to acid etching solutions of such polyvinyl alcohol films. The films produced are several fold more resistant to acid etching solutions than are ordinary polyvinyl alcohol films. Patent 2,830,899 by Clarence A. Brown, assigned to Jones Graphic Products Co.

STEREOTYPE MATRIX

This improved stereotype matrix will not bend or cave in during casting of the metal. A molding blanket made of uncompacted fibrous material impregnated with a cured thermosetting resin is attached to the flong, giving greater dimensional stability. Patent 2,831,224 by Herbert Libberton, assigned to Tenak Products Co.

CLAMPING CURVED PLATES ON PRESS CYLINDER

Curved stereotypes and similar printing plates can be clamped to cylinders by clamping units which will exert clamping pressure on a plurality of hooks despite irregularities in the cooperating plate recesses or deliberate cocking of the plates for obtaining color registry. Patent 2,832,288 by Charles A. Harless, assigned to R. Hoe & Co., Inc.



First Large Harris Five Color in South—Ready for shipment is this 52½ in. by 77 in. five-color Harris offset press with double delivery. Press will be installed in the new 108,000 sq. ft. plant of Miller and Miller, Inc., Atlanta, Ga. Pictured during final testing at Harris-Seybold's Cleveland factory are, left to right: Roy P. Tyler, H-S special services engineer; James Campbell, offset production manager, Miller and Miller, and Emil G. Hnat, H-S Southern district service supervisor.

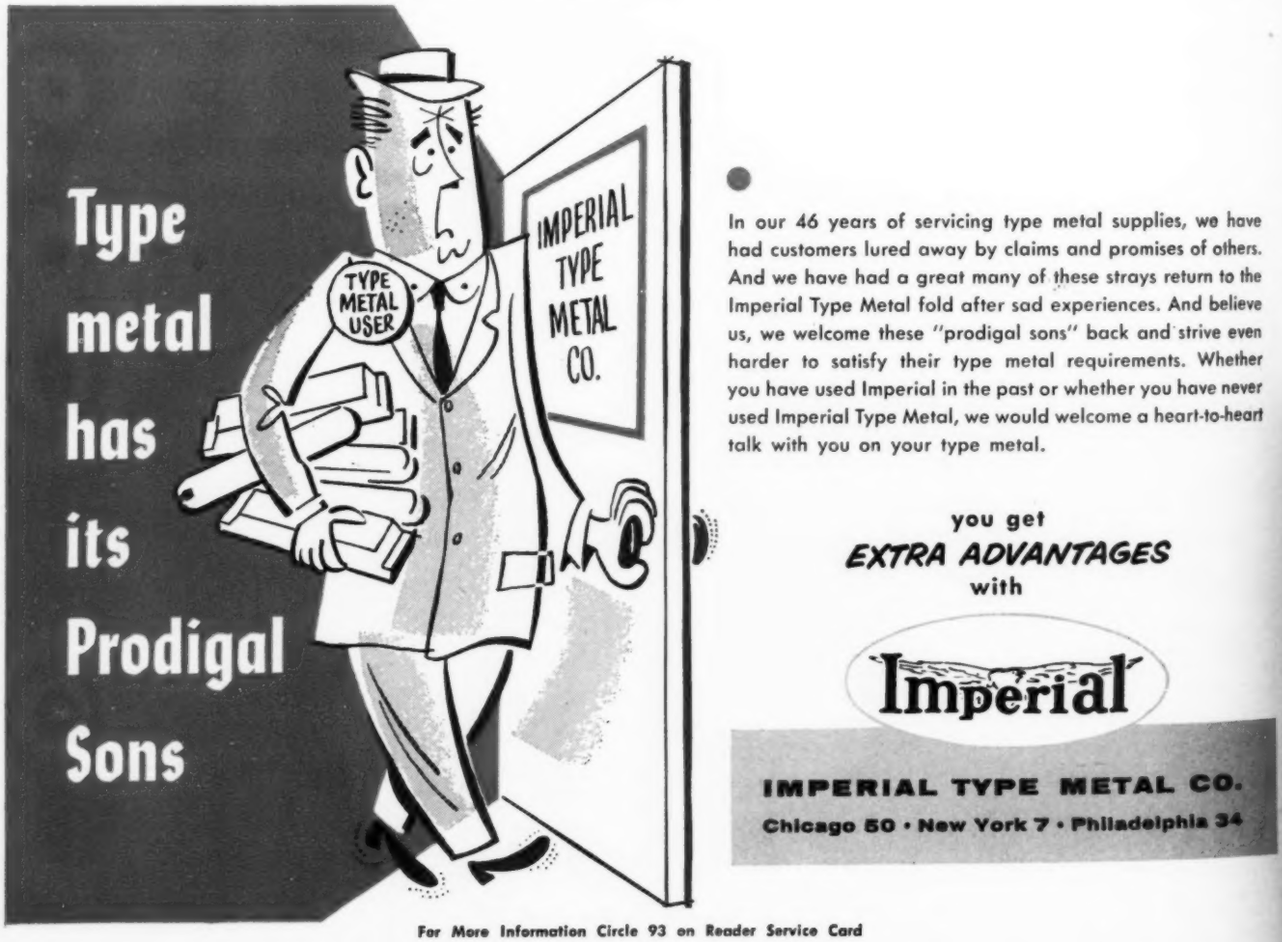
Printing Presses:

PAPER ROLL WINDER

The winder is continuous and the speeds of a full roll and a new core are continuously controlled during roll changing by variation of the pressure supply to friction clutches through which each core shaft is connected to a source of costant horsepower driving power in order to assure properly maintained tension in the web and a smooth and even start on the new core. Patent 2,828,926 by Richard W. Phelps, assigned to The Black-Clawson Company.

OFFSET BLANKET CLEANING DEVICE

An offset blanket cleaning device is adapted for attachment as a unit to existing rotary planographic printing machines. A rubber covered cleaning roll is mounted in a frame which is suitable for attachment to the press in a manner to effect cleaning of the blanket quickly and effectively. Patent 2,832,289 by Lester F.



In our 46 years of servicing type metal supplies, we have had customers lured away by claims and promises of others. And we have had a great many of these strays return to the Imperial Type Metal fold after sad experiences. And believe us, we welcome these "prodigal sons" back and strive even harder to satisfy their type metal requirements. Whether you have used Imperial in the past or whether you have never used Imperial Type Metal, we would welcome a heart-to-heart talk with you on your type metal.

you get
EXTRA ADVANTAGES
with
Imperial

IMPERIAL TYPE METAL CO.
Chicago 50 • New York 7 • Philadelphia 34

For More Information Circle 93 on Reader Service Card

TO HELP BOTH OF US...

Any changes that should be made on your address plate can best be done with this card. If possible, attach your present magazine wrapper address to "Old Address" section. When filling in new address, please be sure to give your title and zone number.

MY OLD ADDRESS READ:

(THE EASIEST AND BEST WAY TO GIVE US THIS INFORMATION IS TO CUT OUT THE ADDRESS SECTION OF YOUR MAGAZINE WRAPPER AND ATTACH TO THIS CARD)

NAME_____

COMPANY_____

COMPANY ADDRESS_____

CITY_____ ZONE____ STATE_____

MY NEW ADDRESS IS:

NAME_____

TITLE AND DEPT._____

COMPANY_____

COMPANY ADDRESS_____

CITY_____ ZONE____ STATE_____

FIRST CLASS
PERMIT NO. 2205
CLEVELAND, OHIO

BUSINESS REPLY CARD
No Postage Stamp Necessary If Mailed In the United States

POSTAGE WILL BE PAID BY

PRINTING PRODUCTION
1276 West 3rd Street
CLEVELAND 13, OHIO

READER SERVICE DEPARTMENT

FOR YOUR CONVENIENCE...

See other side of this card for the quickest and best way to let us know of any change that should be made in your address.

PRESSROOM TIME SAVERS!

"CAPCO" REWINDER . . . Let a CAPCO Rewinder help save you newsprint.

IMPROVED "CAPCO" PORTABLE INK FOUNTAIN . . . Provides color efficiently, in a matter of minutes. Tried, proved and guaranteed. Over **500 in use** in over **200 newspapers.** Weight—approx. 30 lbs.

"CAPCO" FACE-O-TYPE . . . A machine that mechanically reproduces an engraved type screen pattern! Cuts page costs and speeds production.

"CAPCO" PLATE GAUGE . . . New lightweight gauge is designed for checking the thickness of Standard stereotype plates, tubular and flat plates. Easier to use—greater savings.

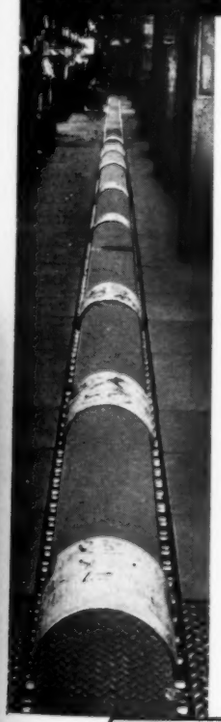
"CAPCO" MULTI-CORE STRIPPER . . . A machine ENGINEERED to strip cores. Increases production as much as 400%. Many savings—will pay for itself out of savings.

Write Today for Complete Details

CAPITAL TOOL & MANUFACTURING CO.
5000 Calvert Road **Union 4-7677**
College Park, Maryland

For More Information Circle 28 on Reader Service Card

STEROPLATE DELIVERY...



SOONER, SURER, EASIER
with JAMPOL METHODS and EQUIPMENT

Typical of how Jampol newspaper handling methods can integrate operations in a plant is the Stereo Plate conveyor system illustrated.

With Jampol handling, you can always be sure of three things—even work flow for substantial savings in time and production costs... longer lasting precision-made equipment... and a definite competitive advantage in meeting delivery deadlines.

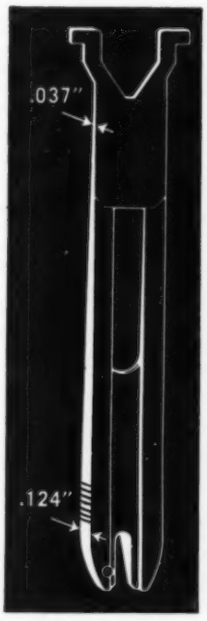
If you would like more information about Jampol methods, and their place in improving your plant operations and profits, please write us.

the JAMPOL COMPANY, Inc.
General Offices and Factory
728-742 61st Street, Brooklyn 20, New York

4042

For More Information Circle 192 on Reader Service Card

Announcing



THE NEW STAR SPACEBAND *for Teletypesetter operation*

Now you can have Star quality in a News-Service TTS Spaceband. This new thickness of Star Spacebands has the same extra hardness and extra resilience that have made all Star Spacebands famous for over 30 years. Its dimensions conform to news-service tape requirements and will give longer life because it is tougher and has more spring. Measurements are .037" minimum to .124" maximum.

The Star TTS Spaceband has the "Streamlined Wedge" originated by Star Parts, which gets the spaceband into the Assembling Elevator faster. This helps to eliminate the transpositions and pile-ups which are so costly in high speed operation.

There are now seven members of the Star Spaceband family to meet every production and typographic requirement. They all carry the "Streamlined Wedge" for fast, smooth assembling.

Order by Star Part Number M-20-7 for the new Teletypesetter Spaceband. They are in stock, ready for same-day shipment.

Precision TRADE ★ MARK Parts

STAR PARTS, Inc.
SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO.
AGENCIES: CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER • SO. ACTON, MASS.
CANADA: PRINTING MATERIAL LTD. AND AGENCIES OVERSEAS

For More Information Circle 168 on Reader Service Card

Mitchell and Edward J. Janke, assigned to Addressograph-Multigraph Corporation.

PLATE CYLINDER RELEASE

This improved auxiliary adjustment for rotary printing presses automatically releases pressure of the plate cylinder against the blanket cylinder when the web breaks. Even though the press continues to turn, the web will not be wound around the rollers. It returns to position at the same adjustment it had before the break. Patent 2,830,537 by Fred R. Jacoby and Lonnie E. Duncan.

CLEANING GRAVURE PLATES

The apparatus is for use on a printing press to clean engraved intaglio printing plates. It includes a yieldable-surfaced roller which runs against the printing plate, a hard surfaced roller which runs against the yieldable-surfaced roller, and a doctor blade which scrapes the surface of the hard surfaced roller to remove the ink. Patent 2,832,286 by Roger W. Ferguson, assigned to American Bank Note Co.

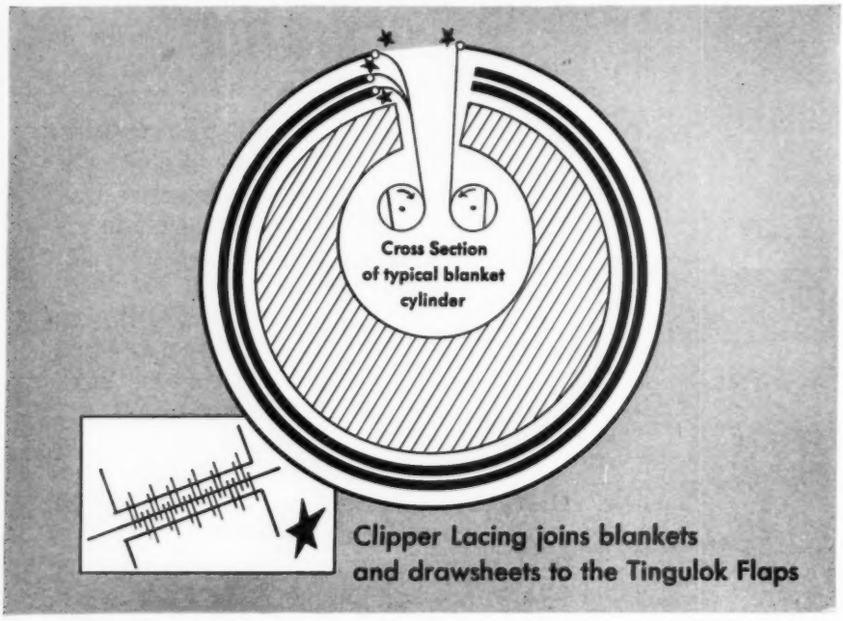
LITHOGRAPHIC PRESS FOUNTAIN SOLUTION

This fountain solution may be used in counter-etching. Instead of the usual chromium compounds, it contains perfluoro and perchloroacetic or propionic acids with a water-soluble thiourea inhibitor and an agent providing nitrate ions. Patent 2,830,536 by William H. Wood and Dolor N. Adams, assigned to Harris-Intertype Corporation.

REDUCE **DOWNTIME** WITH

TINGULOK*

*Reg. U. S. Patent Office



Blankets go on fast with the "TINGULOK" system . . . no blanket punching or pinning is necessary . . . all attachment is done on the cylinder's surface.

"TINGULOK" flaps and blankets are made up complete, to eliminate preparing of blankets and drawsheets. For two- and three-piece combinations, "TINGULOK" gets blankets on fast . . . minimizes downtime. Write for full information today.

"TINGULOK" cuts down on injuries, too. All blankets are put on without putting fingers in the blanket opening at any time. No more skinned knuckles or injured fingers.

TINGUE PRINTING PRESS BLANKETS

TINGUE, BROWN & CO.

"Blanketeers Since 1902"

1765 Carter Avenue • New York 57, N.Y. • CYpress 9-8800
507 Bishop Street, N.W. • Atlanta, Ga. • ATwood 3864
1227 Wabash Avenue • Chicago 5, Ill. • HArrison 7-0083
723 E. Washington Blvd. • Los Angeles, Cal. • Richmond 9-6023

Canadian Sales Agents: ROSS WHITEHEAD & CO. LTD., Montreal, Canada

For More Information Circle 173 on Reader Service Card

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write

INVENTION, INC.
Munsey Bldg., Washington, D.C.

APPARATUS FOR DRYING PRINTED WEBS

Continuous webs of paper are dried as they travel through a roller printing press by this apparatus. The drying gas or fluid is delivered only upon contact of the web with the drying roller which is hollow and adapted to feed and meter the drying fluid as needed. Patent 2,828,553 by Harry J. Jarosz.

CLEANER FOR OFFSET PRESSES

This cleaner is for use on planographic or lithographic duplicating machines. It consists of a frame which can be attached as a unit to the press and which includes cleaning rollers through which the blanket may be drawn for a quick and thorough cleaning. Patent 2,832,290 by Lester F. Mitchell and Edward J. Janke, assigned to Addressograph-Multigraph Corporation.

Feeding, Folding, Delivery:

SHEET FEEDING MECHANISM

A modified drive connection is provided for the elevator which carries a stack of sheets to be fed to a press. This drive is operated at varying rates so that the apparatus can handle sheets of varying thicknesses, e. g., thin paper sheets as well as sheets of cardboard and at optimum rates of feed. Patent 2,828,962 by John W. Miller, assigned to F. P. Rosback Co.

SELECTIVE GATHERING AND COLLATING MACHINE

The arrangement provides mechanism for imparting an intermittent motion to the lineal travel of long continuous aligned strips of material incident to being presented to the action of a strip cutter assembly while maintaining a continuous feeding of the sheets to the cutter assembly. The cut-off element is spring-loaded and is automatically compensated for wear. Patent 2,829,886 by William H. Franzmann, assigned to Hamilton Tool Co.

DEVICE FOR CONVEYING FOLDED OR NON-FOLDED SHEETS

Sheets are fed in a reversed and continuous stream. A gripper is arranged at the circumference of a stack carrier, which gripper seizes and holds the leading edge of a sheet of paper until a catch on a rotating carrier takes along the sheet, which has been turned over in the meantime. As a consequence, the leading edge of the sheet will then be the trailing edge and vice versa. Patent 2,830,813 by Rudolf Hepp.

SHEET FEEDER FOR PRESSES

The sheet feeder for printing presses has a swinging feed which rotates like a stop-cylinder press and carries a sheet toward the impression cylinder at high speed, yet when it is transferred to that cylinder, the speed of the sheet and the cylinder

are the same. Patent 2,831,425 by Hans-Bernhard Schunemann, assigned to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft.

FEEDING DRUM FOR SHEET FED PRESSES

By using a superimposed gear unit, it is possible to make rhythmical stopping of of the stopping drum without vibration. As the sheet can be drawn off the feeding table faster, the feeding speed is thus increased. Patent 2,831,426 by Hans-Bernard Schunemann, assigned to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft.

SHEET SEPARATING MECHANISM

In a machine which raises a pile of sheets to constant height for top removal, this refinement ensures continuity of operation when a pile is exhausted. When one pile is nearly gone, a new pile is raised to operating level for rapid transfer. There are two pile supports. Patent 2,831,683 by George W. Tebbs, assigned to Headley T. Backhouse.

VARIABLE KICKER ATTACHMENT

For use in conjunction with a conveyor, this attachment employs a system of different gear ratios for moving a bar to disturb the normal flow of newspapers from a printing press, stuffing machine, or other device requiring a count of the articles being handled. Patent 2,832,272 by Leland D. Gash.

Bindery:

MECHANISM FOR BINDING SHEETS IN PACK FORM

The mechanism uses two parallel guided holding plates for a pile of sheets to be bound, and a form piece which can be engaged against the back of the sheet pile by means of a spring actuated device which displaces the individual sheets in such manner that the channels formed by the holes are given a curved formation corresponding to the diameter of the wire holes. Patent 2,828,778 by Willi Berberich.

MECHANISM FOR BINDING SHEET PACKS

Piles of sheets are bound by a mechanism which is similar to that covered by patent 2,828,778. This mechanism features a device to prevent any waste of the binding wire by providing a lever on which the wire helix feed roller is mounted so that it is held in the feed position and after the feed has been completed it will release the lever on which the feed roller is mounted to permit lever to be moved out of contact with the helix by spring force. Patent 2,828,779 by Willi Berberich.

BOOK COVERING METHOD

Books are covered by first applying an adhesive to the appropriate areas of a bound book or to a cover, after which the two are brought together and placed in a press. A high frequency electric current is then passed into, through and around the bound book and cover to expedite the drying of the adhesive without the application of direct heat. Patent 2,829,228 by George R. L. Webb.

AUTOMATIC STITCHER

An automatic single head stitcher for the production of magazines, pamphlets, etc., is also adapted for multiple stitching operations. The machine incorporates a stitching head, an electrical actuating circuit, a photo-sensitive switch, a sheet conveyor, and means associated with conveyor for actuating light beam to establish a selected stitching pattern. Patent 2,829,372 by Joseph Lojewski.

PERFORATING BLADE HOLDER

The holder mounts and positions a perforating blade accurately with respect to a cylinder for making perforations in printing continuous forms. A dovetail groove or recess is provided in a cylinder and a pair of wedge-shaped members mounted in the recess clamp the blade in the desired position. Patent 2,832,411 by Augustus J. Richards and Leo S. Wanda, assigned to Bonnar Vawter, Incorporated.

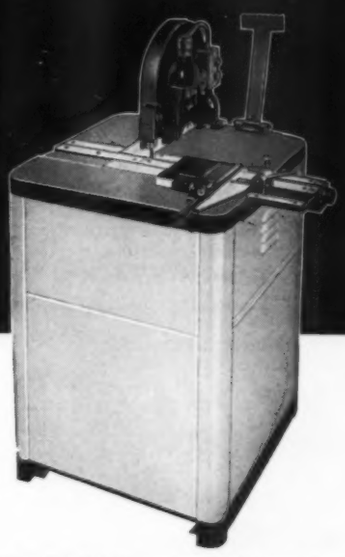
Miscellaneous:

STENCIL SCREEN FRAME

Frame is made of a plastic material which is resistant to printing ink stain. It is made of identically constructed parts in a variety of sizes and includes interlocking portions whereby any size frame required may be set up in a matter of seconds. Patent 2,832,285 by Wayne H. Brownlee, assigned to Kurz-Kasch, Incorporated.

Please inform us if PRINTING PRODUCTION is incorrectly addressed to you.

NOW!
TWO ROUSE TIME-SAVING
PLATE SAWS
With Exclusive Automatic Feed
For Photoengravers,
Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.

2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.

4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

H. B. ROUSE & COMPANY
2214 North Wayne Avenue, Chicago 14, Illinois

ROUSE PRODUCTS...The Standard of the World Since 1899

For More Information Circle 152 on Reader Service Card

NEWS ITEMS

Blattenberger Receives Honorary Degree—Raymond Blattenberger, Public Printer of the United States, received an honorary degree of doctor of engineering at the recent 90th commencement exercises of Lehigh University, Bethlehem, Pa. The announcement was made by Dr. Martin D. Whitaker, president of the University.

Two GPI General Managers—Appointment of G. Thomas West as general manager of the Eastern Division, General Printing Ink Co., was reported by

WEST

POLEY

J. S. Thome, vice president, Sun Chemical Corp. and general manager of the corporation's Graphic Arts Group. West will be responsible for the Eastern area, which includes branches in Norwood, Mass.; Philadelphia, and Cleveland. His headquarters will be in New York, N. Y. Carlton V. Poley has been named to succeed West as general manager of the New England branch of General Printing Ink.

New Manufacturing Plant—Graphic Arts Manufacturing Corp. has announced the opening of its new plant and sales office at 22 Franklin Ave., Clifton, N. J. Facilities will be concentrated on design, manufacture, and sale of composing room equipment. Stan M. Charles is president of the firm.

KNAPP

GUINARD

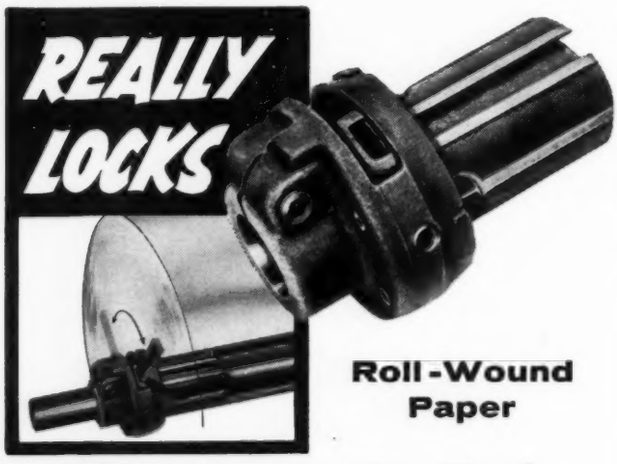
CROWE

KESSLER

New York & Penn Appoints Four—New York & Pennsylvania Co., Inc. has announced four executive changes in the administrative offices of its Johnsonburg, Pa. Division. O. H. Knapp was appointed technical assistant to R. N. Jones, manager of the division. Knapp will advise on scientific problems and will assist in the planning of special projects. R. K. Guinard, formerly assistant general superintendent, was named technical director. F. W. Crowe was advanced to assistant general superintendent and J. H. Kessler was made personnel manager.

Champlain Relocates Chicago Office—Champlain Company, Inc. has announced the relocation of its Chicago offices to new and larger quarters at 7356 N. Cicero Ave.

Film Distributorship—Unitronics, Incorporated has been appointed exclusive sales and distribution agency in the Graphic Arts for Tecnifax diazotype sensitized materials. Tecnifax, a diazo-sensitized cellulose acetate film, is used in photoengraving and lithographic and gravure printing to proof color process separation positives and as litho proofs for multicolor printing. Through a special arrangement, Unitronics has marketed the



Efficiency Expansion Chucks

In one operation, lever the cam and lock it. It won't slip —ever. Unwind, rewind, or brake easily. There are efficiency expansion chucks for either fibre or steel cores up to ten inches in diameter—for shafts of 1" to 3½" in diameter in graduations of 1/16".

Chucks are inter-changeable—no rights or lefts. Give years of service—made of malleable high strength castings. Surfaces which contact core are precision machined. Lever action applies powerful force to the expansion jaws. Ribbed jaws bite firmly into core, eliminating core slippage when starting or changing speeds, even under extreme brake tension.

Write for the full time and money saving facts to—

VALLEY MFG. CO. Valley, Nebraska

For More Information Circle 197 on Reader Service Card

Operation of the Offset Press

By Theodore F. Makarius

This 254 page book has been written especially for the man who must makeready and operate the offset printing press.

In this 254 page book are 25 chapters and 57 pages of Case Histories for overcoming specific troubles. Some of the chapters deal with: Setting the Pressure, Inking Rollers, Dampeners, Ink Fountains, Mounting Plate and Blanket, Split Fountain Printing, Drying Problems, Register Troubles and others. Included is a six page Ink Problem Reference Chart.

Color Charts are included. One of these demonstrates difference in cleanliness of color when mixing two inks which complement each other. Another color chart has been prepared to show the result of mixing different percentages of components.

Size 5¼ in. by 7⅞ in., 254 pages, 19 illustrations. Bound in gold stamped semi-flexible cover.

Price, per copy, $10.25 postpaid

(Please send remittance with order.)

PRINTING PRODUCTION

1276 West Third St. Cleveland 13, Ohio

film under its own registered tradename of Colomat for several years, while Tecnifax promoted it concurrently as Diazochrome.

New District for Intertype—Intertype Company, Div. Harris-Intertype Corp., has established a new four state district with headquarters at 55 Public Sq., Cleveland. According to Raymond B. Daigle, vice president-domestic sales, the new district will provide improved sales and service coverage for customers in Ohio, West Virginia, and western New York and Pennsylvania. William R. Evans has been appointed Cleveland district manager. He joined Intertype in 1953.

EVANS

KOWALSKI

Star Parts Representative—Appointment of Joseph Kowalski as representative for Star Parts, Inc. in the mid-Southeast area has been reported by Emil Bendow, sales manager. Kowalski, who succeeds James Bourque, will cover Kentucky, Virginia, West Virginia, Maryland, Washington, D. C., and Delaware. Bourque now represents the company in Tennessee, North and South Carolina, Georgia, Alabama and Florida.

Associations Elect Presidents—Printing Industry of Ohio has elected Thomas G. Roberts president. Roberts is vice president of A. S. Gilman, Inc., Cleveland. Another election announced was that of Cy Prudhomme, Milprint, Inc., Milwaukee, Wis., as president of the Controllers' Institute of the Graphic Arts.

Linotype Promotes Two—Elmer E. Henkel has been named to represent Mergenthaler Linotype Co. as production engineer in Oakland, East Bay, San Joaquin Valley and Monterey Peninsula of northern California. Also announced was the assignment of William S. Miller to cover all of Arkansas, the northeast tip of Texas, southern Missouri, and the northwest part of Mississippi for the company.

HENKEL

MILLER

Dexter Appoints Australian Distributor—Edwards Dunlop and Co., Ltd., Sydney, Australia, has been appointed distributor for Dexter bindery equipment, according to an announcement by Dexter Company, Div. Miehle-Goss-Dexter, Inc. The firm is already a distributor for Miehle Company, also a division of M-G-D. In order to gain first hand knowledge of American bindery practices, John W. Dunlop, chairman, recently made an extensive tour of numerous Dexter installations in the United States.

ATF Sales Representatives—M. Lee Helm has joined American Type Founders Co., Inc. as sales representative, with headquarters in Indianapolis, Ind. He will work under the direction of John C. Jackson, manager, Cincinnati, O. branch. Also announced was the appointment of Robert S. Knight as sales representative in the Los Angeles area. Knight will work under Orson H. Udall, Los Angeles branch manager.

Blank Accepts New Position—Edward Blank has resigned as assistant to the president of Publishers Printing-Rogers Kellogg Corp. to become director of production management and new developments, New York Employing Printers Assoc., according to Don H. Taylor, association president. Blank will assume the task of keeping NYEPA members informed of technological advancements and new techniques in both letterpress and lithography. He will serve members through personal consultations and plant visits and will coordinate the associa-

UP-TO-DATE WITH Vitaplate
One thing for sure, your production executives in the future will be more selective when it comes to choosing zincs. They are bringing their departments up-to-date by fitting customer requirements to certain types of zincs. Some will still use conventional methods with the new fine grained zinc alloy Vitaplate, Imperial Duraplate or Imperial Regular Zinc. Others will choose the new Vitaplate-VitasolV process for one-bath, one-bite, one-machine etching of combination flats. Ask your informed Imperial representative about these three Imperial Engraving Zincs.
3 quality zincs
VITAPLATE • DURAPLATE • REGULAR
AND VITASOLV
Imperial
*The use of VitasolV comes within the limits of the Dow Patents.
For More Information Circle 84 on Reader Service Card

tion's services to member firms in the field of equipment and production.

Long active in Craftsmen circles and a former president of the New York Craftsmen's Club, Blank is chairman of the club's national convention to be held in New York next year. At Publishers Printing-Rogers Kellogg Corp., Blank served as plant manager in charge of both letterpress and lithographic operations before being appointed assistant to the president in 1957.

BLANK

FULLER

New England Branch Manager—Appointment of Arlan F. Fuller as manager of Intertype Company's New England branch, with headquarters in Boston, was reported by Raymond B. Daigle, vice president-domestic sales. Fuller succeeds Harold B. Atterbury, who has resigned to enter the publishing field.

Midwestern Sales Representative—Perma-Flex Roller Corp. has named James W. Monahan as Midwestern sales representative with headquarters at 333 N. Michigan Ave., Chicago.

Universal Mono-Tabular Appointment—Raymond E. Abel has been named sales manager for Universal Mono-Tabular Corp., according to a recent announcement by Henry T. Honig, president.

New Hess & Barker Office—Hess & Barker has announced the opening of Midwestern sales offices in the Chicago Daily News Building, 400 W. Madison St., Chicago. Also announced was the appointment of Andrew P. Monroe, jr. as regional sales manager. Monroe is a mechanical engineer with more than 10 years experience selling and servicing webfed presses.

MONROE LEE

Challenge Elects President—J. Wesley Lee was elected president and general manager of the Challenge Machinery Co. at a recent directors' meeting. He succeeds his father, J. Edgar Lee, who died on April 20, and is the third generation of Lees to head the company. Lee is a director of the National Printing Equipment Assoc. Also announced was the election of Robert C. Gould as vice president. He has been a director and assistant secretary of the company since 1951. Gould is also assistant sales manager.

ATF Type Manager in West—Robert L. Gyllenberg has been appointed Western regional type division manager, American Type Founders Co., Inc. He will be in charge of ATF's 19 type dealers in the Midwest and Pacific states and will operate from the company's branch at 519 W. Monroe St., Chicago.

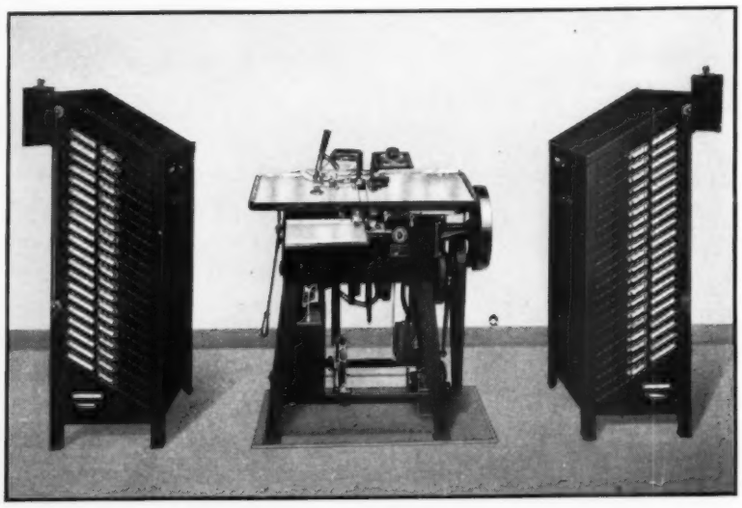
Jones Press Employee Retires—James Ennis, 69, recently retired as pressman for Jones Press, Minneapolis, Minn. Ennis, who began his career in 1910 as a cylinder feeder, comes from a family of printers.

Goers Joins Huber—Arthur E. Goers has joined the central district sales force of J. M. Huber Corp.'s Ink Division, it was announced by J. S. Hart, vice president of the division.

GOERS BRUNDAGE

Brundage Resigns from Cline—Harvey E. Brundage recently resigned from Cline Electric Mfg. Co. as chairman of the board. He is well known in the newspaper printing field, having served the industry for over 35 years. Except for a brief vacation, Brundage's plans for the immediate future remain unannounced.

Fred A. Hacker, 67, web division regional sales manager, Eastern states, American Type Founders Co., Inc., died May 31 in Philadelphia. Employed by ATF for 23 years, he was instrumental in the development of new photochemical methods in camera and platemaking.



Ludlow Simplicity

Simplicity in relation to Ludlow operation is not just a descriptive term, but a most important factor in the production program.

First of all, the machine itself is simply designed for a single purpose—quick, accurate production of quality slug composition—without "gadgets" that often only hinder efficient operation. This simplicity makes for moderate operating and upkeep expense.

Furthermore, the simplicity of Ludlow matrix assembly and casting enables capable compositors without any previous experience soon to produce satisfactory job and display composition.

Simplicity is only one of many reasons for the utmost satisfaction that hundreds and hundreds of users have found with the Ludlow System of all-slug composition.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

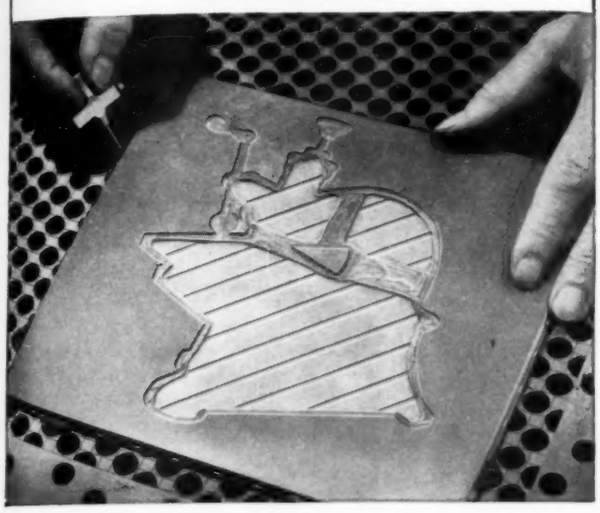
Set in members of the Ludlow Tempo family

For More Information Circle 107 on Reader Service Card

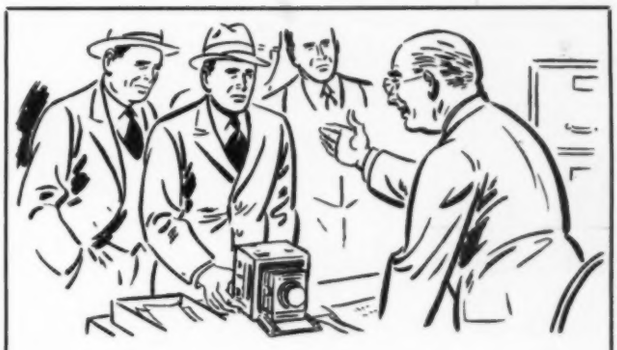
PMC STERLING TOGGLE BASE

Precision ground to give an accuracy unequalled by other methods of machining PMC Sterling Toggle Base in magnesium or semi-steel simplifies lock-up—saves time—increases profits.

THE PRINTING MACHINERY CO.
436 Commercial Square
Cincinnati 2, Ohio



For More Information Circle 147 on Reader Service Card



Collision with the Camera Crew

Managing editor tells them their pictures lack snap. Photographers tell him to look at the original prints—clear and vigorous as can be.

It is discussions like this that lead to an overhaul of the whole newspaper production process—often with a change to Certified Mats as one of the results.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

For More Information Circle 36 on Reader Service Card

Niles Passes—Edward T. Niles, 64, president, Niles & Nelson, Inc., died on May 23 in Lawrence Hospital, Bronxville, N. Y., after a short illness. He founded Niles & Nelson in 1927 and played an important role in the development of the rubber inking roller.

ATF Sales Representatives—William Welsh has joined American Type Founders Co., Inc., as sales representative covering eastern Missouri and southern Illinois. He will work under Henry Krumm, St. Louis branch manager. Robert Williamson has been named to represent the company in Chicago, and will work under the general direction of W. J. Taylor, Chicago branch manager.

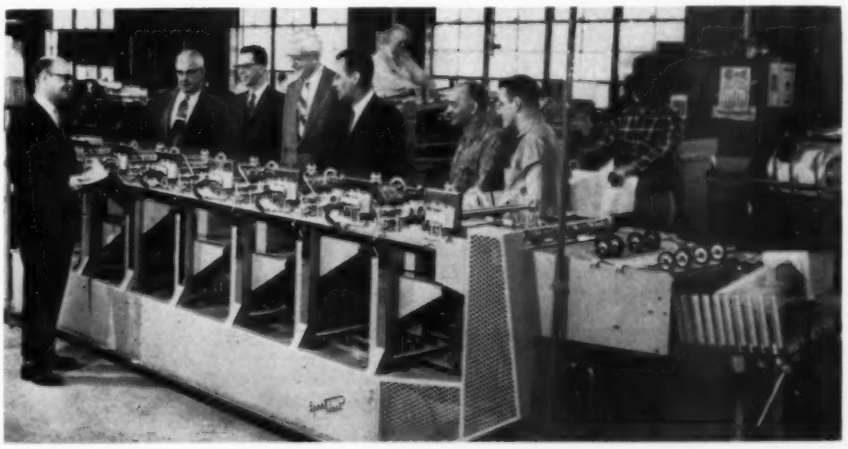
Di-Noc Acquires Cramer Dry Plate—Acquisition of G. Cramer Dry Plate Co., St. Louis, Mo., producer of glass plates and films for the Graphic Arts, has been announced by Di-Noc Chemical Arts, Inc. The Cramer company will continue to operate as a separate entity under the name of Cramer Dry Plate & Film Co., a subsidiary of Di-Noc.

Darling-Payne Integrates—Ernest Payne, president, Ernest Payne Corp. has announced that its wholly owned subsidiary, Darling-Payne Corporation, which handled offset equipment for both companies, has been integrated with the parent company. The name Darling-Payne has been discontinued. Also reported was the appointment of Walter J. Guise as a member of the company's sales staff.

Partlow Names Advertising Manager—Appointment of W. C. Roberts as advertising and publicity manager of Partlow Corporation was reported recently by Howard W. Partlow, jr., president. Roberts will also assume charge of sales promotion work and market research.

Bolton Forms New Division—John W. Bolton & Sons, Inc., Lawrence, Mass., has announced the forming of a machine knife sales division. C. E. Scollard has been named field sales supervisor and under his direction are John H. Ebel, New England representative, and Thomas J. Craney, New York and northern New Jersey representative.

Robertson Appoints Two — D. Thomas Kennedy has been promoted to advertising manager, Robertson Photo-mechanix, Inc., according to Leonard S. Florsheim, jr., president. Kennedy was formerly in



300th Speed-Klect—The seven-station Speed-Klect collator being viewed at Williams and Marcus Printing Co., Primos, Pa., is the 300th Speed-Klect machine to be installed by Didde-Glaser, Inc. According to the manufacturer, the machine can automatically gather and glue up to 10,000 quadruplicate (4 sheets and 3 carbons) 8½ in. business forms. Left to right are: George McWilliams, Eastern service representative, Didde-Glaser; C. S. Govern, E. W. Dubois, and C. K. Davis, sr., all Williams and Marcus executives, and Sam Zecca and Joseph Vaughan, operators.

KENNEDY

KREIMAN

charge of sales activities. Robert T. Kreiman has been named sales manager and will head a new sales program for distribution of Robertson equipment through an international dealer organization.

American Subsidiary Formed—J. F. Crosfield, Ltd., London, England, has formed an American subsidiary in New York, N. Y., known as Crosfield Electronics, Inc. The firm will provide sales and service facilities for Crosfield color register controls and related equipment in the United States and Canada. The executive vice president is Edgar L. Parks.

ATF Names Two Representatives—Robert W. Hines has been appointed sales representative for American Type Founders Co., Inc., serving the Chicago and northern Indiana area. Also reported was the appointment of Waldo E. May as ATF sales representative covering Kentucky and part of Indiana.

Whiting-Plover Elects—Ralph A. Atkins was elected vice president of manufacturing, Whiting-Plover Paper Co., at the company's annual meeting. He will continue as mill manager in addition to his new duties.

ATKINS

KRAFT

Precise Engineering Sales Manager—Precise Engineering Co. has announced the appointment of Howard D. Kraft as sales manager. In his new capacity Kraft will be in charge of sales, advertising and sales promotion for the United States, Canada, Latin America and South America.

Ink Institute Elects Officers—Elected recently as president of National Printing Ink Research Institute was Carl Aneshansel, vice president, Ander Chemical Co. Other officers are: Joseph S. Hart, vice president, Printing Ink Div., J. M. Huber Corp., vice president; Herbert Livesy, secretary, and Matt Leckey, president, Sinclair and Valentine Co., Div. American-Marietta Corporation, treasurer. Dr. A. C. Zettlemoyer was reappointed director of research.

ANESHANSEL

Printing Machinery Co. Sold — H. T. Simpson, president, Printing Machinery Co., announced recently that stockholders of the firm have approved the separation of manufacturing and investments divisions. The manufacturing division has been sold to Lee Augustine, vice president and general manager, and a group of associates. The sale includes the name, The Printing Machinery Co. Augustine, who is expected to be president and treasurer of the company, reports the location of the factory will remain at 436 Commercial Square, Cincinnati, O. The investments division will be known as Printing Investments Co.

AUGUSTINE

Appleton Names Representative—Frank C. Arnold has been appointed northeastern representative for Appleton Machine Co. He will make his headquarters in Henderson Harbor, N. Y., and will represent the company in New England and New York state.

CARBIDE PRINTERS' "THINSAW"

Just $39.50 and YOU TRY IT FREE FOR 30 DAYS!

Here's a saw that's designed especially for your composing room! The patented, long-lasting carbide tips cut base, slugs and new alloys including Dowmetal, operating smoothly without scream, pileup or sticking. It's manufactured with as many teeth as saws costing much more . . . gives you cleaner cuts, freedom from burrs and excellent back rake cutting . . . without need for trimmer blades. Patented construction holds the carbide tips firmly against side thrust, while an extra strong braze secures them for life.

The Gay-Lee Printers' "Thinsaw" is standard in many large composing rooms, where it outlasts all others and soon pays for itself. Want proof in your own shop? Try a Gay-Lee Printers' "Thinsaw" at our risk . . . *absolutely free for 30 days.* If not completely satisfied, return it for full credit. You can't go wrong with this free trial offer, *so act now!*

(IMPORTANT: Please specify make of machine on which saw is to be used.)

*With Gay-Lee patented method of construction, brazed teeth with circular seat definitely will not break loose from saw body.

Patented—Manufactured under license.

GAY-LEE COMPANY
CLAWSON • MICHIGAN

CARBIDE SAW SPECIALISTS

For More Information Circle 65 on Reader Service Card

MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assoc.—1958 Conv., Hilton Plaza Hotel, Cincinnati, O., Oct. 13-15. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA Mechanical Conf.—Mgr. Richard E. Lewis, ANPA Mechanical Dept., 750 Third Ave., New York 17, N. Y.

Book Manufacturers' Institute—1958 Conv., Greenbrier Hotel, White Sulphur Springs, W. Va., Oct. 8-11. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Educational Graphic Arts Exposition—Coliseum, New York, N. Y., Sept. 6-12, 1959. Gen. Mgr. A. E. Giegengack, 5600 Massachusetts Ave., N.W., Washington 16, D. C.

Fifth District Craftsmen's Conf.—Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Graphic Arts Trade Assoc. Executives—Managing Director, Printing Industry of Twin Cities, Inc., 2645 University Ave., St. Paul 14, Minn.

Gravure Technical Assoc.—1959 Conv., Drake Hotel, Chicago, Mar. 6-8. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Mechanical Conf.—1959 Conf., Hotel Statler, Detroit, Jan. 18-20. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf.—1958 Conf., Hotel Orlando, Decatur, Ill., Sept. 13-14. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1958 Conf., Hotel Chalfonte-Haddon Hall, Atlantic City, N. J., Sept. 8-11. Exec. Secy. Floyd C. Larson, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1958 Conv., Statler Hotel, Detroit, Mich., Aug. 10-13. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc.—1958 Conf., Stout State College, Menomonie, Wis., Aug. 3-7. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1958 Conv., Statler Hotel, Detroit, Mich., Aug. 10-13. Secy. Francis J. Tominey, *New England Printer & Lithographer*, 470 Atlantic Ave., Boston 10, Mass.

Intl. Typographic Composition Assoc.—1958 Conv., Ambassador Hotel, Los Angeles, Calif., Oct. 14-17. Exec. Secy. W. E. Switzer, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conf.—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—1958 Conf., Town House Hotel, Kansas City, Kans., Sept. 6-7. Kansas Gen. Mgr., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 115 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—Exec. Dir. Oscar Whitehouse, 381 Fourth Ave., New York 16, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1959 Conf., Shelburne Hotel, Atlantic City, N. J., Mar. 12-14. PNPA General Mgr. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—1959 Conv., Twin Cities (Minneapolis-St. Paul, Minn.), June 11-13. Exec. Secy. Fred A. Schulz, Buckbee Mears Co., Toni Building, St. Paul 1, Minn.

National Assoc. of Photo-Lithographers—1958 Conv., Statler Hotel, Boston, Mass., Sept. 10-13. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Paper Trade Assoc.—1959 Meeting, Waldorf Astoria Hotel, New York, N. Y., Apr. 1-3. Secy. J. H. Londergan, 220 E. 42nd St., New York 17, N. Y.

National Printing Equipment Assoc., Inc.—1958 Meeting, Statler Hotel, Dallas,

WHY OF COURSE
BY MANHATTAN INDUSTRIAL
SAY, BOB I DIDN'T KNOW THERE IS AN OUTFIT THAT DID PRESS ERECTION AND ENTIRE PLANT MOVING
MANHATTAN INDUSTRIAL CONTRACTING CO. 3-17 26 AVENUE ASTORIA NY
SURE MANHATTAN INDUSTRIAL CONTRACTING IS ALL OVER THE COUNTRY ERECTING NEW AND USED PRESSES OF ALL SIZES AND MANUFACTURE! THEY DO A TERRIFIC JOB AND THEY GIVE ESTIMATES WITHOUT OBLIGATION.

For More Information Circle 111 on Reader Service Card

SPEED PRODUCTION WITH RICHARDS'

SAWS • ROUTERS • MORTISERS

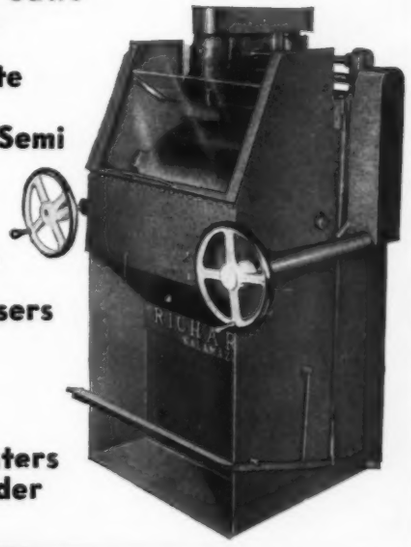
Stereotype Saws Three Sizes

Curved Plate Routers Tubular or Semi

Flat Plate Routers Three Sizes

Plate Mortisers Bench or Pedestal Models

Special Routers Built To Order



J. A. RICHARDS COMPANY

903 N. PITCHER STREET • KALAMAZOO, MICHIGAN

For More Information Circle 150 on Reader Service Card

Only the Carlson Finisher Has Complete Visibility

That's why we put the motor out of the way

NO PEERING UNDER

NO BENDING BACK

Seeing exactly what you are doing is the key to accurate, fast outlining and mortising. To get a clear, unobstructed view, the motor and drive of the Carlson Finisher are put *underneath* the table. Plates are placed face up with no locking or blocking needed. You see every line and have perfect control at all times. Work is easier and faster.

When outlining, the cutting tool is raised and the work is moved to the tool, making a perfect vertical cut. The first cut for mortises is pinpointed with the swing-up Locating Pin. The tool is raised through the plate and the mortise is quickly made. In both cases the chips adhere to the dead metal. Cuts right up to live material if necessary.

THE CARLSON FINISHER IS SPECIFICALLY USED FOR MORTISING AND FINISHING BY OVER 150 NEWSPAPERS

Chesley F. Carlson Company

BEN FRANKLIN BUILDING / MINNEAPOLIS 15, MINNESOTA

For More Information Circle 33 on Reader Service Card

Roms ROTATING WATER UNIONS

TEST THIS REMARKABLE NEW LOW COST, HIGH QUALITY WATER UNION ON SPECIAL 60 DAY TRIAL!

Reduce Downtime! Reduce Replacement Costs!

Only our supreme confidence in the performance of the new Roms union permits us to make an offer like this. Test it on your own presses for 60 days. Let it prove its merit before you buy. Features flame coated, corrosion-proof, wear resistant, ceramic seats . . . Lightweight . . . Long Life . . . Sealed bearings . . . Low Cost.

If you don't agree Roms is the best water union you've ever used . . simply return it. No questions asked! We bill you only if you retain unit after 60 day trial period.

Complete Systems Furnished for Ink Carriage Cooling Systems

CLIP COUPON FOR DETAILS ON ROMS 60 DAY TRIAL OFFER

ROMS, INC., 816 N. KOSTNER AVE., CHICAGO 51, ILL.

Please send me literature and complete information on Roms 60 day trial offer.

NAME _____ POSITION _____

COMPANY _____

STREET _____

CITY _____ STATE _____

For More Information Circle 244 on Reader Service Card

Tex., Oct. 13-16. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc. — Secy. Lewis R. Greene, Westerly (R. I.) *Sun.*

New England Newspaper Mechanical Conf.—1958 Conf., Statler Hotel, Boston, Oct. 18-19. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Newspaper ROP Color Conf.—1958 Conf., Waldorf Astoria Hotel, New York, N. Y., Sept. 15-17. Secy Arthur Brashears, American Assoc. of Newspaper Representatives, 141 E. 44th St., New York, N. Y.

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Albany (N. Y.) *Times-Union.*

Northwest Mechanical Conf.—Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1958 Conf., Mark Hopkins Hotel, San Francisco, Calif., Sept. 5-7. Secy. Ed Maggi, Phillips & Van Orden Co., 4th & Berry Sts., San Francisco, Calif.

Packaging Institute Assoc.—1958 Meeting, Edgewater Beach Hotel, Chicago, Oct. 13-15. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1958 Conv., Statler Hotel, Dallas, Tex., Oct. 13-16. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N.W., Washington 15, D.C.

Research and Engineering Council—1959 Conf., Sheraton McAlpin Hotel, New York, N. Y., May 18-20. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D.C.

SNPA (Western Div.) Mechanical Conf.—1959 Conf. Hotel Texas, Fort Worth, Tex., Mar. 8-10. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc. — 1959 Conv., Robert Meyer Hotel, Jacksonville, Fla., Apr. 27-29. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Screen Process Printing Assoc., Intl.—1958 Conv., Sheraton Palace Hotel, San Francisco, Calif., Aug. 22-24. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1958 Conf., Dinkler-Plaza Hotel, Atlanta, Ga., Aug. 17-19. Secy. Grady M. Lemons, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

Technical Assoc. of the Graphic Arts—Secy.-Treas. B. L. Sites, Miehle Printing Press & Mfg. Co., 2011 W. Hastings St., Chicago 8.

Information is yours for the asking if you take advantage of PRINTING PRODUCTION's Reader Service Card.

ENGINEERING FOR THE GRAPHIC ARTS

TO MEET GROWTH REQUIREMENTS

- *ANALYSIS OF PRESENT OPERATIONS*
- *REPORTS AND RECOMMENDATIONS*
- *PLANS AND SPECIFICATIONS*
  - *plant rearrangement*
  - *plant extension*
  - *new plant*
- *CONSTRUCTION MANAGEMENT*

•

CHAS. T. MAIN, INC.

BOSTON, MASSACHUSETTS • CHARLOTTE, NORTH CAROLINA

For More Information Circle 110 on Reader Service Card

BEVERIDGE MATS CLICK WITH OLD-TIMERS, TOO!

● **An old-timer in the stereotype field is an honored mechanical executive with years of practical experience. That's why old-timers rely on Beveridge Mats. They know from years of experience that they can rely on Beveridge quality mats and unexcelled service. Old-timers and *new-timers* alike find these mats provide clean release of plate, deep molding qualities and sharp faithful reproductions. Can we talk?**

New Products Division of
THE BEVERIDGE PAPER COMPANY
705 W. Washington Street
Indianapolis 4, Indiana

For More Information Circle 20 on Reader Service Card

EQUIPMENT

Sales & Installations

REPORTS

ATF Installations

American Type Founders Co., Inc. has announced the following installations:

ATF Chief 15 Offset Press—Quality Print Shop, Pompano Beach, Fla.; Loveless Printing Co., Atlanta, Ga.; Hildreth Printing Co., Hialeah, Fla.; Copenhaver Printing Co., Martinsville, Va.; Bond Press, Miami Beach, Fla.; Osborne Printing Co., Miami, Fla.; Falcon Press, Inc., Tampa, Fla.; Tri City Printing Co., St. Petersburg, Fla.; Gainesville Letter Shop, Gainesville, Fla.; Beneke Printing Co., Clearwater, Fla., and Lithographing Printing Mailing Corp., New York, N. Y. (2).

ATF Chief 20 Offset Press—Birch-Anderson, Gadsden, Ala.; Bassett Furniture Co., Bassett, Va.; Trushel Printing Co., Leesburg, Fla.; Duff Printing Co., Cleveland, Tenn.; Oakview Printing Co., High Point, N. C.; Vincent Press, New York, N. Y.; Wall Street Letter Co., New York, N. Y., and S. Shear & Son, New York.

ATF Chief 22 Offset Press—Melchior-Armstrong-Dessau Co., Ridgefield, N. J.; Hempstead Sentinel, Inc., Hempstead, N. Y., and Popular Science Publishing Co., New York, N. Y.

ATF Chief 29 Offset Press—Douglas Printing Co., High Point, N. C.; Atlantic Printing Co., Fort Lauderdale, Fla.; The Print Shop, New York, N. Y.; D. L. Terwilliger Co., Inc., New York, N. Y., and Young's Photo Offset Service, Inc., Paramus, N. J.

ATF Flex-o-Jobber Press—Loveless Printing Co., Atlanta, Ga.

ATF 241 Craftsman Camera—Murree Press, New York, N. Y., and Van Kell Printing Co., New York, N. Y.

Lawson Installations

The Lawson Company, Div. Miehle-Goss-Dexter, Inc., has announced the following installations:

Lawson 55 in. Series V65-H Cutter—Hallmark Cards, Inc., Kansas City, Mo.; R. J. Reynolds Tobacco Co., Winston-Salem, N. C.; Telegraph Press, Harrisburg, Pa.; Green Rose Bindery, New York, N. Y.; Southwest Tablet Mfg. Co., Dallas, Tex.; Connecticut Printers, Inc., Hartford, Conn.; Nifty Tablet Mfg. Co., Houston, Tex., and Western Electric Co., Chicago.

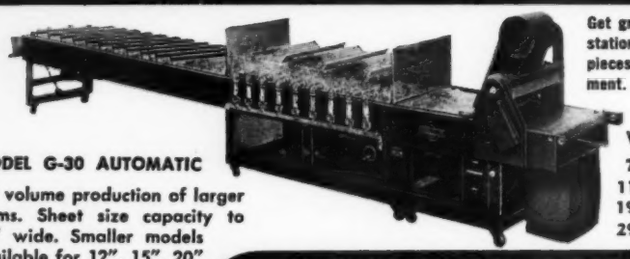
Lawson 52 in. Series V65-H Cutter—C. H. Forsman, Fairlawn, N. J.; Free Methodist Publishing House, Winona Lake, Ind., and Butler Paper Co., Fort Wayne, Ind.

Lawson 46 in. Series V65-H Cutter—Eastman Kodak Co., Rochester, N. Y. and Kurtz Brothers, Clearfield, Pa.

Lawson 39 in. Automatic Clamp Cutter — Berman Paper Corp., New York, N. Y.; Wm. B. Eerdman Publishing Co., Grand Rapids, Mich.; Kentucky Press, Louisville, Ky.; Rush Bindery, Chicago, and Edward J. Smith, Peoria, Ill.

Imperial Plays Host to Photoengravers — Imperial Type Metal Co. was host recently to the Photo-Engravers Technical Society of Philadelphia at the company's Philadelphia plant. Shown are members of the Society inspecting machinery and production methods throughout the plant. Of special interest was a demonstration of Imperial's powderless etching process.

RAISED PRINTING IS HIGHLY PROFITABLE BUSINESS



MODEL G-30 AUTOMATIC

For volume production of larger forms. Sheet size capacity to 30" wide. Smaller models available for 12", 15", 20" sheet widths.

Get greater returns from your present printing presses. Social and business stationery, advertising folders, box wraps, greeting cards and other decorative pieces have "eye-appeal" when produced with Virkotype raised printing equipment.

WRITE FOR INFORMATION AND SAMPLES

VIRKOTYPE COMPOUNDS AND INKS
7 VIVID VIRK-OPAQUES
11 METALLICS
19 RICH COLORS
29 BRILLIANT SPARKLES

VIRKOTYPE CORPORATION

Virkotype Sales Corporation
608 SO. DEARBORN ST., CHICAGO 5, ILLINOIS

Main Office and Plant:
111 ROCK AVENUE, PLAINFIELD, N. J.

THE WORLD'S LARGEST MANUFACTURER OF MACHINES, COMPOUNDS AND INKS FOR RAISED PRINTING

For More Information Circle 236 on Reader Service Card

Regent 41¾ *in. Automatic Clamp Cutter*—Honolulu Paper Co., Honolulu, Hawaii; Kellogg Company, Battle Creek, Mich.; Lucas Press, Stamford, Conn.; A. J. Lipp Co., Inc., New York, N. Y.; Estabrook Printing Co., Syracuse, N. Y., and Stoffel Seal Corp., Tuckahoe, N. Y.

Lawson Series C 3-Knife Trimmer — Crest Litho, Inc., Utica, N. Y.; John F. Cuneo Co., Chicago, Ill.; Desaulniers & Company, Moline, Ill.; Emerson Press, Inc., Pittsburgh, Pa.; L. A. Lee Co., Inc., Dalton, Ga.; Otterbein Press, Dayton, O.; Rutherford Press, East Rutherford, N. J.; Standard Publishing Foundation, Cincinnati, O.; Taylor Publishing Co., Dallas, Tex., and Zondervan Publishing Co., Grand Rapids, Mich.

Lawson Model S Drill—Bee Bindery, Chicago; A. B. Dick, Louisville, Ky., and Rand Avery-Gordon Taylor, Inc., Boston.

Manhattan Moves Newspaper

Manhattan Industrial Contracting Co. has reported the moving of the Boston *Globe* into its new $12 million plant. Prior to moving the contents of the old plant, Manhattan delivered and installed 37 color convertible Hoe units, seven folders, and seven color decks. Departments which had to be moved between the morning and evening editions of the paper included composing, engraving, photo, stereotype, and offices. Two outside elevators, two cranes, 20 trucks, and 75 men were utilized on the job.

Chemco Installations

Chemco Photoproducts Co., Inc. reports the following installations:

Chemco Roll Film Camera—Knapp Photo Engraving Co., New York, N. Y., and Leader Photo Engravers, Inc., Trenton, N. J.

Model 510 *Dow-Chemco Etching Machine* — Dennison Manufacturing Co., Framingham, Mass.; West Penn Engraving Co., Greensburg, Pa.; Long Island *Daily Press*, Jamaica, N. Y.; Washington (D. C.) *Daily News;* New York (N. Y.) *World-Telegram & Sun;* Rapid Service Engraving Co., Buffalo, N. Y.; Empire Photo Engraving Co., Rochester, N. Y.; Johnstown Tribune Publishing, Johnstown, Pa.; Pittsburgh (Pa.) *Press;* Drinnon, Incorporated, Macon, Ga.; Forth Worth (Tex.) *Star Telegram;* Houston (Tex.) *Press;* Hanson Engraving Co., Memphis, Tenn.; Florida *Times-Union*, Jacksonville, Fla.; Jacksonville (Fla.) *Journal;* Panama City (Fla.) *News Herald;* Pictorial Engraving Co., Charlotte, N. C.; Worth Engravers, Ft. Worth, Tex.; Greenville (S. C.) *News-Piedmont* and Southern Photo Process Engraving Co., Atlanta, Ga.

Also the Toledo (O.) *Blade;* Detroit Gravure Corp., Detroit; Van Alstyne Engraving Co., Detroit; Adcraft Engraving Co., Youngstown, O.; Apex Engraving Co., St. Louis, Mo.; Youngstown Arc Engraving, Youngstown, O.; Buckbee-Mears Co., St. Paul, Minn.; Capitol Photo Engraving Co., Chicago; Poweretch Corporation, St. Louis, Mo.; Color Ad Engraving Co., St. Louis, Mo.; Liberty Photo Engraving Co., Chicago; A-Bar-A Engraving Co., Phoenix, Ariz.; Bee Engraving Co., Fresno, Calif.; La Presse Publishing, Montreal, Quebec, Can.; National Photo Engraving Co., Montreal; London Stamp & Stencil, Montreal, and Standard Engraving, Hamilton, Ontario, Can.

Intertype Installations

Intertype Company, Div. Harrison-Intertype Corp. has reported the following installations:

Fotosetter—Everlast Process Printing Co., New York, N. Y. and Washington (D. C.) *Post and Times-Herald.*

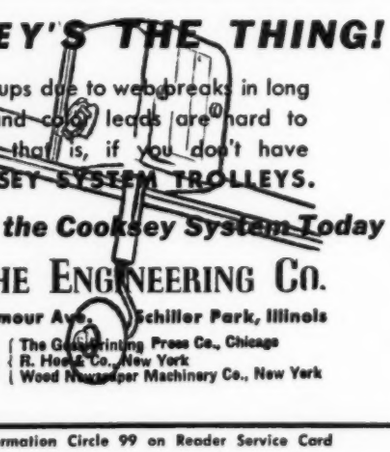
Model C2 Intertype—Savannah (Ga.) *Morning News* and *Evening Press* (5); Altoona (Pa.) *Mirror* (2); Beaumont (Tex.) *Enterprise* (2); Lawrence (Mass.) *Eagle-Tribune* (2); Ontario (Calif.) *Daily Report* (2); Lubbock (Tex.) *Avalanche Journal;* Central Typesetting Co., Philadelphia; Port Chester (N. Y.) *Daily Item;* Syracuse (N. Y.) *Post Standard,* and White Plains (N. Y.) *Reporter-Dispatch.*

Model C3 Intertype—Watchtower Bible and Tract Society, Brooklyn, N. Y. (2); A. W. Hausman, Philadelphia, and Morrissey Printing Co., Waterbury, Conn.

Model C4 Intertype—New York (N. Y.) *World-Telegram & Sun;* DBA Gibbs Typesetting Co., Huntington Park, Calif.; Idaho County *Free Press,* Orangeville, Id., and Franklin Publishing Co., Rockland, Mass.

Model F2 Intertype Mixer—Pittsburgh (Pa.) *Press* (2); De Luxe Check Printers,

TROLLEY'S THE THING!



●Wrap-ups due to web breaks in long folder and color leads are hard to prevent, that is, if you don't have COOKSEY SYSTEM TROLLEYS.

Investigate the Cooksey System Today

KORTHE ENGINEERING CO.

9353 Seymour Ave., Schiller Park, Illinois

Sales Agents { The Goss Printing Press Co., Chicago
R. Hoe & Co., New York
Wood Newspaper Machinery Co., New York

For More Information Circle 99 on Reader Service Card

Mechanism of the Linotype and Intertype

Written for Machinist-Operators, Machinists, Superintendents and Students

Technical operating knowledge of the Linotype and Intertype is available in the 14th edition of this 334 page book. Revised and amplified by Oscar R. Abel and Windsor A. Straw, the text includes 200 illustrations. Information has been added about late improvements in the machines. A practical and essential book for every composing room.

$5.50 per copy (Cash with order.)
Postpaid in U.S.A. only

PRINTING PRODUCTION
1276 W. 3rd St., Cleveland 13, O.

Chatsworth, Calif.; Moore Typesetting Co., Evansville, Ind.; George Banta Co., Menasha, Wis.; William Patrick Co., Newark, N. J.; Sun Printing Co., Pittsfield, Mass., and Metropolitan Press, Seattle, Wash.

Model F4 Intertype Mixer—New York (N. Y.) *World-Telegram & Sun* (2); Recording & Statistical Corp., Boston; Eastern Typesetting Co., Hartford, Conn.; Typographic Services, Inc., Philadelphia, and McCormick Armstrong Co., Wichita, Kan.

Model F4-4sm Intertype—Commercial Envelope Mfg. Co., New York, N. Y.

Model G4 Intertype Mixer—Newspapers Incorporated, Phoenix, Ariz.

Model G4-4sm Intertype—Port Arthur (Tex.) *News*.

Hi-Speed Model V—Clarion (Pa.) *Republican and Democrat;* Paragould (Ark.) *Daily Press,* and Warren (Pa.) *Times.*

The Torrington (Conn.) *Register* has installed Intertype's 8 pt. Imperial 1B with bold. Column width was reduced from 11½ to 11 picas.

Intertype's 8 pt. Imperial 1A with bold has been installed at Red Bank (N. J.) *Register*. Column width was reduced from 11½ to 11 picas.

The Erie (Pa.) *News* and *Times* are using 8 pt. Regal with bold as body type; 7 pt. Regal with bold for classified pages; and 5½ pt. Imperial for stocks. A column reduction from 11½ to 11 picas was reported.

The Vineland (N. J.) *Times Journal* has installed 9 pt. Imperial 2B with bold.

Intertype's 8 pt. Imperial 1B TTS is being used at Towanda (Pa.) *Review*. Columns were reduced from 12 to 11 picas.

The Meriden (Conn.) *Record* and *Journal*, morning and evening dailies, are using 8½ pt. Imperial 2B with bold. Columns were reduced from 11½ to 11 picas.

Linotype Installations

Mergenthaler Linotype Co. has announced the following installations:

Linotype Comet—White Plains (N. Y.) *Reporter* (2); Jenkintown (Pa.) *Times Chronicle;* Lebanon (Pa.) *News;* Atlantic City (N. J.) *Press;* Southern New England Typographic Service, Hamden, Conn.; Chicago *Bulletin-Record;* Poole Brothers, Inc., Chicago; Madisonville (Ky.) *Messenger;* Fort Lauderdale (Fla.) *News* (3); Danville (Va.) *Register*, and Great Falls (Mont.) *Tribune* (2).

Model 5 Linotype—Worzalla Publishing Co., Stevens Point, Wis., and Williams & Field, Inc., Colorado Springs, Colo.

Model 29 Linotype Mixer—Daily Record Co., Baltimore, Md.; Colonial Press, Inc., Clinton, Mass., and Seelman Company, Chicago.

Model 30 Linotype—Kurt H. Volk, Inc., New York, N. Y., and Oakland (Calif.) *Tribune*.

Model 31 Linotype—Biddle Purchasing Co., New York, N. Y.; Thomas Publishing Co., New York, N. Y.; Blanchard Printing Co., Boston, Mass.; Southern New England Typographic Service, Hamden, Conn.; Blanchester (O.) *Star-Republican;* Northwest Suburban Typesetters, Des Plaines, Ill.; Publishers Typesetters, Chicago; Johnson Press, Inc., Pontiac, Ill.; Witt Printing Co., Eldorado Springs, Mo.; Owensboro (Ky.) *Messenger & Inquirer;* Roanoke (Va.) *Times and World News,* and Reno (Nev.) *State Journal.*

Model 32 Linotype—Radnor Graphic Arts, Inc., Radnor, Pa. and Eloy (Ariz.) *Enterprise.*

Model 33 Rangemaster Linotype—Newspaper Supply, Spokane, Wash.

Model 35 Rangemaster Linotype—Easton (Pa.) *Express;* Hardin County *Enterprise,* Elizabethtown, Ky.; New Bern (N. C.) *Sun Journal,* and Roanoke (Va.) *Times and World News.*

Model 36 Rangemaster Linotype—Green Bay (Wis.) *Press-Gazette.*

The Wooster (O.) *Daily Record* has changed its body type to Linotype's 7½ pt. Corona.

The Decatur (Ala.) *Daily* is using Linotype's 8 pt. TTS Corona as its body type.

The Montgomery (Ala.) *Advertiser* has installed 8 pt. Corona for its body and 5½ pt. Corona for its classified type.

A change to 9 pt. Teletype Corona for it body type was made by Spartanburg (S. C.) *Herald-Journal.*

Installed at Hopkinsville (Ky.) *New Era* as its body type was 9 pt. TTS Corona with Bold Face No. 2.

The Huntington (W. Va.) *Herald Dispatch & Advertiser* is using 9 pt. TTS Corona for its body type, while 5½ pt. Spartan is being used in its classified section.

Hoe Installations

Four newspapers in Brazil and one in Venezuela have ordered Hoe press and stereo equipment totaling close to $2 million, it was reported recently by R. Hoe & Co., Inc.

Rio de Janeiro (Brazil) *Correio da Manha* has purchased a four unit press, a double former, double delivery folder, and four reels, tensions and pasters.

Rio de Janeiro *O Globo* ordered a four unit press with a double former, double folder, four reels, tensions and pasters, plus an additional color cylinder, three reverses and stereo equipment.

Rio de Janeiro *Journal de Commercio* will add a two unit press with a double former, single delivery folder and stereo equipment.

Porto Alegre (Brazil) *Correio do Povo* ordered a three unit press, a double former, double delivery folder, three reels, tensions and pasters, and a finishing and cooling machine.

Caracas (Venezuela) *El Nacional* purchased a six unit press with double former, double delivery folder, one color cylinder, one reverse and associated equipment for this new press line, plus stereo equipment. In addition, one more unit was ordered for an existing press line.

Pereira Named Consultants

Pereira and Associates has been appointed consulting engineers for a mechanical building addition to the Milwaukee (Wis.) *Journal.* Over-all planning for the new addition, which will cover 150,000 sq ft., is under the supervision of Don Ebert, business manager of the *Journal.*

Authentic Savings in Grade A Surplus

In Chicago, Detroit, St. Paul

Miehle Verticals, V-45 and V-50
Miehle Horizontals & Model 29s
Miehle 41 units, chain dlvs.
Miehle 56 unit, chain dlvy.
Miehle O-T-C 56" Two Color
Miehle 4/0 62" and 7/0 units
Miller Simplex 20x26 and
Miller SY Majors 28x41
Miller TY Two Color 28x41
Kelly models 1, 2, B and C
Seybold 44" Model 60 Autospacer
Seybold 64" Model 10-Z
Cleveland OO and K automatics
C & P 50" automatic cutter
Seybold 4-VA 3 knife trimmers

TYPE & PRESS of Illinois, Inc.

3312 N. Ravenswood • Chicago (13)

Circle 177 on Reader Service Card

PAPER CONDITIONING

The Modern Efficient Economical Way

Built to operate at Any Machine Speed

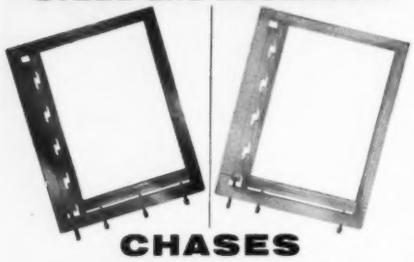
Systems for Gravure Printing, to set water set inks, Better register on carton printing, Curl Control in laminating.

For any press or machine width in the converting field

VAPO SYSTEMS COMPANY
130-32 W. Home Ave. Villa Park, Ill. Ph. Te. 2-7678

For More Information Circle 237 on Reader Service Card

AMSCO
STEEL and ALUMINUM



CHASES

THE BEST AND MOST ECONOMICAL MONEY CAN BUY!

Amsco's electrically welded steel chases, with the smoothly ground joints are world renowned.
Amsco Aluminum Chases are specifically made for operations wherein lightness is a desired factor. Steel insert supports reduce wear to a minimum at the contact points of the foot stick and side wedge screws.
Squared and true Amsco Chases are patterned from a template or a blue print.
Amsco supplies a "complete chase line", for newspapers, commercial printers, stereotypers and electrotypers. Standards or specials are available.

CATALOG AVAILABLE FROM DEALERS OR WRITE DIRECT

AMERICAN STEEL CHASE CO.
31-31 FORTY-EIGHTH AVENUE
LONG ISLAND CITY 1, N. Y.
Circle 9 on Reader Service Card

"ARMOR PLATE" YOUR INKS!
GLAZCOTE INK CONDITIONER
Provides tough, scuff- & scratch-resistant finish.
1 lb. can $2.20 Send for Price List
CENTRAL COMPOUNDING COMPANY
1723 North Damen Avenue • Chicago 47, Illinois
Mfrs. of Trik, 20/20 Overprint Varnish, 33 & 0-33 Ink Conditioners
Circle 34 on Reader Service Card

Literature

(Continued from Page 18)

BLANKETS AND DRAWSHEETS

A catalog of blanket and drawsheet samples for all types of press operations has been issued by Tingue, Brown & Co. Blankets are said to have a high degree of comeback ability when subjected to wraps and paper breaks. Circle No. 354 on Reader Service Card.

MILLER OFFSET PRESS

A colorful 24 page booklet featuring the E.B.CO. offset press has been produced by Miller Printing Machinery Co. Full color illustrations and duotones are included. Illustrations of press and its various parts are presented as well as specifications and available accessories. Circle No. 355 on Reader Service Card.

Bindery, Mailroom

COLLATING MACHINE MOVIE

A color film entitled, *Speed-Klect in Action*, has been produced by Didde-Glaser, Inc. and is being made available free of charge to any firm interested. Speed-Klect collating machine operations are shown. Film is in 16 mm., sound, and runs 11 min. Circle No. 333 on Reader Service Card.

BINDERY BOOKLET

The Dexter Company, Div. Miehle-Goss-Dexter, Inc. is offering its second booklet in a series of four regarding bindery operations. The McCain-Christensen saddle stitching and trimming combination are described. Circle No. 312 on Reader Service Card.

BUNDLE TYING MACHINE

Saxmayer automatic and manually operated bundle tying machines are discussed in literature issued by National Bundle Tyer Co. Single or cross-tie operations are performed on machines which utilize jute or sisal. Circle No. 349 on Reader Service Card.

DRILLING MACHINES

Specifications and features of several models of Climax paper drilling machines are included in literature distributed by Climax Manufacturing Co. Motor driven hand and foot operated models, as well as attachments for slotting and slitting are described. Also described is a Corner-matic round cornering machine. A specimen sheet showing various results achieved on Climax paper drills is included. Circle No. 308 on Reader Service Card.

CHALLENGE CUTTERS

Challenge Machinery Co. has prepared an attractive two color, eight page booklet descriptive of its latest line of power and lever paper cutters. Sizes range from 19 in. through 30 in. Features and specifications of the 10 models in the series are given. Circle No. 356 on Reader Service Card.

AUTOMATIC LABELING MACHINES

Two attractively printed bulletins descriptive of two automatic labeling machines have been made available by Cheshire, Inc. Included

are illustrations, diagrams, descriptive matter, and specifications of the new units. Circle No. 323 on Reader Service Card.

WALLASTAR MAILROOM SYSTEM

A five unit mailroom system for newspapers is described in material published by Toronto Star, Ltd.'s research engineering department. System comprises: Wallastar bundler, Starwrapper, stack conveyors, stack starters, and special sectional tables. Circle No. 327 on Reader Service Card.

SHERIDAN INSERTING BOOKLET

An illustrated booklet describing its line of newspaper stuffing machines is being offered by T. W. & C. B. Sheridan Co. Sheridan 24P stuffing machine is equipped with four or five hoppers and is said to have a maximum operating speed of 12,000 per hr. Circle No. 328 on Reader Service Card.

Miscellaneous

ROP COLOR REPORT

A free monthly report on national ROP color advertising linage is available to newspapers and advertising agencies from R. Hoe & Co., Inc. *Hoe Report on ROP Color* is compiled from data received from 411 newspapers in 132 cities. Circle No. 334 on Reader Service Card.

STEEL EQUIPMENT MANUAL

A 48 page *Reference Manual of Steel Equipment*, No. 485, is available free of charge from Equipto. Information regarding shelving, drawers, lockers, and various other business and shop equipment is included. Circle No. 322 on Reader Service Card.

CONVEYOR SYSTEM

A technical report entitled, *Automatic Conveyor System Speeds Stereo Plate Handling*, has been released by Gifford-Wood Company. The four page illustrated report is descriptive of an interfloor conveying system used in transferring plates from stereo department to pressroom. Circle No. 311 on Reader Service Card.

DUPLICATING SUPPLIES CATALOG

Latest advances in offset duplicating supplies are described in Catalog No. 22 offered by Michael Lith, Inc. Designed for use with duplicating machines, the 48 page two color catalog is divided into four illustrated sections: Copy preparation aids, platemaking supplies and chemicals, bindery aids, and press accessories. Circle No. 315 on Reader Service Card.

PIN FEED LABELS

A two color folder concerning the uses of pin feed labels has been released by Allen Hollander Co., Inc. Included with folder is a sample of Able-Stik pin feed pressure sensitive labels. The labels can be used on a variety of business machines. Circle No. 314 on Reader Service Card.

LINTON IDEA KIT

A kit containing commercial printed specimens on Linton Bristols has been made available by Linton Brothers & Co., Inc. Included in Idea Kit No. 11 are a business card, door hanger, greeting card, and two direct advertising pieces. Circle No. 318 on Reader Service Card.

ALBANY LUBRICANT BULLETIN

Adam Cook's Sons, Inc. is offering its bulletin No. 10 in which greases and oils for various friction areas of presses are discussed. Circle No. 346 on Reader Service Card.

POCKET SIZE CALCULATOR

A circular calculator for multiplication, division and proportions has been introduced by General Industrial Co., and is available free of charge. It is said operation is simple and results accurate. Circle No. 319 on Reader Service Card.

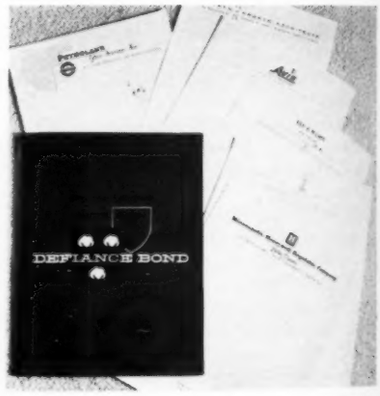
LETTERHEAD SAMPLES

Issued recently by the Whiting-Plover Paper Co. is the Plover Bond Letterhead Library, which features the 12 grand award winning letterheads in the company's 1957 national letterhead competition. Circle No. 320 on Reader Service Card.

MATERIALS HANDLING BULLETIN

Engineered materials handling systems for paper and printing industries are discussed in a bulletin offered by Gifford-Wood Company. Conveying systems for newsprint, stereos, magazines, mail sacks, bundles, and brokes are described. Circle No. 353 on Reader Service Card.

LETTERHEAD PORTFOLIO

A portfolio of letterheads illustrating modern design trends is offered by Byron Weston Co. Included are examples of business, indus-

trial, and professional letterheads produced by letterpress, lithography, and die stamp engraving. Circle No. 307 on Reader Service Card.

ALGRIP FLOOR PLATE

Alan Wood Steel Co. has released its A. W. Algrip booklet, AL-E30. Algrip abrasive rolled steel floor plate is recommended for safe footing wherever slipping hazards exist in a plant. Circle No. 335 on Reader Service Card.

NEWSPAPER SUPPLY CATALOG

Supplies and equipment for composing, stereotype, photoengraving, and press departments are listed in a catalog available from Eastern Newspaper Supply, Inc. Circle No. 336 on Reader Service Card.

PRINTING PRODUCTION
CLASSIFIED ADVERTISING

CLASSIFIED RATE—$1.00 per line. Minimum 5 lines, 25 characters per line. Cash with order.

CLOSING DATE — 15th of month preceding date of issue. We will forward all mail addressed to box numbers.

WANTED FINANCIAL BACKING FOR NEW MOLDING PROCESS

Have developed and perfected a method of molding plastic printing plates and type that results in a superior printing form at a fraction of the cost of present methods. Applicable to flat bed and rotary letterpress. Need financial assistance in manufacturing and marketing. Write Box 577 PRINTING PRODUCTION.

WANTED TO BUY

Publisher wants to buy two color web fed rotary press for 8½ x 11 format magazine. Send specifications and other details to Box 579, PRINTING PRODUCTION

COMPOSING ROOM FOREMAN WANTED

Experienced composing room foreman for 100 employee operation using Intertypes, Monotypes and Ludlow wanted. Detail past experience in first letter. We will not contact references until we have contacted applicant. Reply Box 578, PRINTING PRODUCTION

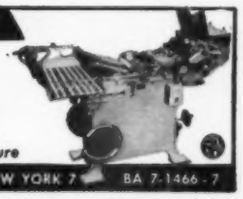
BEST OFFER TAKES

Vandercook 22-34 Power Offset Proof Press with special adjustable sheet bed minus dampening system and gripper bar. 1951 cost, $12,000. Extra split vibrator and spare rolls. Arrange inspection by writing or calling A. C. Zettlemeyer, Lehigh University, Bethlehem, Pa.

The MULTIPRESS for IMPRINTING ENVELOPE PRINTING SPECIALTY PRINTING

WHAT'S YOUR LINE?

Write Dept. PE for descriptive literature



B. VERNER & CO., INC. 52 DUANE ST., NEW YORK 7 — BA 7-1466 - 7

For More Information Circle 210 on Reader Service Card

STAINLESS PRECISION TOOLS

Stainless Steel T-Squares, Triangles, Straightedges, and Precision Drawing Instruments and Scales. Circular and Linear Engraving to order.

Catalog on request

THEO. ALTENEDER & SONS

Since 1850

1223 Spring Garden Street • Philadelphia 23, Pa.

For More Information Circle 209 on Reader Service Card

GET FULL PRODUCTION QUALITY PRINTING WITHOUT STOPS FOR UNNECESSARY WASHUPS

Doyle SHEET CLEANERS PATENTED

Write for Free Bulletin

J. E. DOYLE CO. 1220 West 6th St., Cleveland 13, Ohio

For More Information Circle 52 on Reader Service Card

NEW 336 PAGE 9" x 12"

CATALOG OF THE GRAPHIC ARTS

Hundreds of wood and metal type faces, thousands of items for every graphic arts use. One of the largest, complete, illustrated catalogs in entire history of the industry! Send $2.00 to cover cost of printing and mailing—REFUNDED WITH YOUR FIRST ORDER!

AMERICAN WOOD TYPE MFG. CO.

DEPT. PE, 42-25 NINTH ST., LONG ISLAND CITY 1, N. Y.

For More Information Circle 240 on Reader Service Card

MORRISON

- SAW TRIMMERS
- ROUTERS
- SLUG STRIPPERS

Add Savings and Profits to All Composing Rooms. Write for Proof.

THE *Morrison* COMPANY

125 W. Melvina St. Dept. P Milwaukee 12, Wis.

For More Information Circle 127 on Reader Service Card

PRECISION *Flat-Ground* TURTLE

Mirror-smooth, extra thick top, 24" x 28½", is heavily ribbed to maintain accuracy. Adjusts from 36½" to 39½" working height. 5" x 1½" double ball bearing swivel type composition casters. Heavy-duty, rugged construction assures years of trouble-free service.

NOLAN *Corporation* ROME, N. Y. Dept. 827-C

For More Information Circle 239 on Reader Service Card

HOW TO ADJUST

WORK-UPS

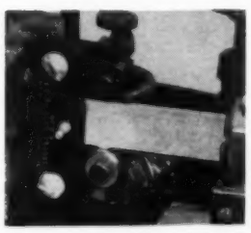
By Wm. H. Lichter and Geo. F. Smalley

This 24-page booklet analyzes causes of work-ups and gives proper procedure for locking up forms.

PRICE $1.00 CASH WITH ORDER

PRINTING PRODUCTION

1276 West Third Street, Cleveland 13, Ohio



BORDER MAGIC with the ROLL-A-FACE

Now, for the first time, with the Exclusive ROLL-A-FACE attachment it is possible to obtain many tooled designs in Elrod borders.

• Eliminates most all border block and slide recasting • Obtain full length borders and rules • Eliminates ribs, short piecing, and border breaks • Easily attached, no holes to drill or tap • Anyone can use efficiently • Produces a hundred or more designs • Moderately priced

Ask about Speed Angle, too. The Printer's Angle Gauge. Makes angled composition ordinary composition.

Write today for full details.

V. C. SHIDLER PRODUCTS

720 Milford Street Glendale 3, Cal.

For More Information Circle 245 on Reader Service Card

DRUPA Printing Show

(Continued from Page 69)

ment available in the United States for the longer run work.

Pressure Will Be On American Equipment Manufacturers

It seems apparent to the writer, that as European markets and practices are developed to meet the needs of the proposed economic union and higher wage casts, that a severe strain may be placed on American ingenuity in the race to maintain equipment superiority. In this connection, the association of several American producers with their European counterparts will help greatly to bring together the best from both sides of the Atlantic.

German equipment is well designed and constructed, and there is no doubt that European, especially German, talent is alert to the needs of the customer wherever he may be. They have the flexibility, too, that is necessary to fully meet those needs.

An example is one large manufacturer who moved into the United States market in 1950 with no reputation here and no customers. He now has nearly 100 units installed throughout the country. These results came not so much from salesmanship, as from a willingness to design and change quickly to meet customers' desires, and to give service to the customer. Other firms can tell similar stories, and a continuation or expansion of these efforts will make the future Graphic Arts industry truly international.

When one takes a look at the equipment picture from another viewpoint, that of the effect on Europe of American equipment, he sees two problems: (1) The price barrier still existing between the European buyer and the American producer. (2) The ingenuity of the European and his intensive utilization of technical skills. It would appear that American equipment will find its way into European practices only when it can be shown to be the best way to do a job, or when its cost can be paid out against European wage rates. These rates are low, but in many cases, productivity is likewise low, making payout easier than one might think it could be.

The wages of skilled workers may well be expected to rise in the future, as the machine becomes more important as a production tool. However, it is likely that any new equipment offered by United States suppliers in Europe will find a local competitor designed to meet the many local conditions at an attractive cost.

European equipment entering the United States has some advantages due to exchange rates, but none of it can be considered cheap by any standard. American equipment going the other direction has not only the higher price, but an adverse exchange rate. Sometimes government restrictions are more difficult to overcome than a tariff barrier.

In spite of these problems, the United States manufacturer enjoys a reputation for producing high quality machines, and everywhere one hears: "I want to buy it, but cannot afford it now".

Sales Engineers of R. Hoe & Co., Inc. are pictured at a recent three day general conference in New York, N. Y. W. McHenry Browne, vice president for press sales, reported that Hoe's sales for the six months ended Mar. 31 were "substantially higher than for the same period a year ago." Standing, left to right, are: Ray Cassidy, Ray Dittrich, John Pritchard, Joseph Krupp, Gordon F. Elrod, Wm. W. Henderson, Wallace Dombrow, Fred Gebhard, Ray Willoughby, Charles M. Keeter, Wm. Pezdirtz, Peter Peaquin, and James Crowe. Seated are: Fred Adame, L. D. Pollock, W. McHenry Browne, W. J. Robinson, and Gilbert Higgins.

ADVERTISERS' INDEX

JULY 1958

PRINTING PRODUCTION REPRESENTATIVES

PAUL B. HOLDER, Advertising and Promotion, 1276 West Third St., Cleveland 13, O. Phone PRospect 1-0088.

WILLIAM L. OSBORN, Eastern Advertising Representative, 2709 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-5980.

MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

WM. A. AYRES, West Coast Representative, 233 Sansome St., San Francisco 4, Calif. Phone YUkon 6-2981.

JACK DeBAR SMITH, Wm. A. Ayres Co., 5880 Hollywood Blvd., Hollywood 28, Calif. Phone HOllywood 2-1133.

Alan Wood Steel Co. 2
Alteneder, Theo., & Sons 83
American Publishers Supply, Inc. 72
American Steel Chase Co. 94
American Wood Type Mfg. Co. 95
Atlantic Zinc Works, Inc. 16

Baum, Russell Ernest, Inc. 8
Beveridge Paper Co. 91
Burgess Cellulose Co. 6

Capital Tool & Mfg. Co. 81
Carlson, Chesley F., Co. 90
Central Compounding Co. 94
Certified Dry Mat Corp. 87
Chemco Photoproducts Co., Inc. 61

Dexter Company, Div. Miehle-Goss-Dexter, Inc. 19
Doyle, J. E., Co. 95
Dutro, Orville, & Son, Inc. 7

Eastern Newspaper Supply, Inc. 79
Electric Eye Equipment Co. 21

Gay-Lee Company 88
General Electric Co. 14
Gerrard Steel Strapping Co. 13
Goss Printing Press Co., Div. Miehle-Goss-Dexter, Inc. 9

Hammond Machinery Builders, Inc. ..... Inside back cover
Heidelberg Automatic Presses 12
Hoe, R., & Co., Inc. 3

Imperial Type Metal Co. 80, 85
Intertype Company ..... Outside back cover

Jampol Company, Inc. 81

Korthe Engineering Co. 92

Ludlow Typograph Co. 86

Main, Chas. T., Inc. 91
Manhattan Industrial Contracting Co. 89
Master Sales & Service Corp. 15
Matrix Contrast Corp. 22
Mergenthaler Linotype Co. 57
Monomelt Company, Inc. 65
Morrill, George H., Co. 20
Morrison Company 95

Nolan Corporation 78, 93

Printing Machinery Co. 87
PRINTING PRODUCTION 10, 84, 92, 95

Richards, J. A., Co. 89
Roms, Incorporated 90
Rouse, H. B., & Co. 83
Rudge Associates, Inc. 64

Scott, Walter, & Co. 4
Shidler, V. C., Products 93
Sta-Hi Corporation 1
Star Parts, Inc. ..... Inside front cover, 81

Tingue, Brown & Co. 82
Type & Press of Illinois 93

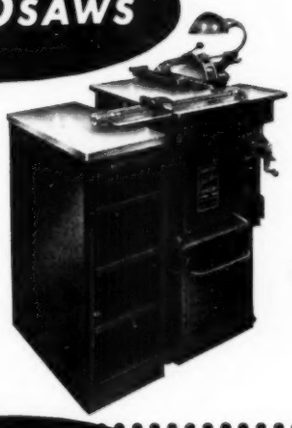
Valley Manufacturing Co. 84
Vandercook & Sons, Inc. 67
Vapo Systems, Inc. 93
Verner, B., & Co., Inc. 95
Virkotype Corporation 92

Wood Flong Corp. 11
Wood Newspaper Machinery Corp. 17

Hammond OF KALAMAZOO

TRIMOSAWS and STEREO EQUIPMENT

TRIMOSAWS



G-100 *Glider*
"The Saw with the Ball Bearing Table"

Bench Glider
Mounted on Floor Stand

Ben Franklin
"Finest Saw in the Low Price Field"

EasyKasters

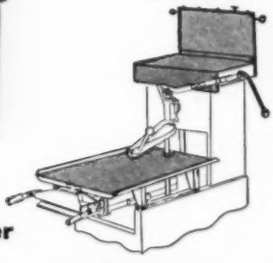
Full Page
EasyKaster

5 and 6 Column
EasyKaster

EasyKaster Pig Molder

Scorchers

EasyKaster
Scorcher



Full-Page
Scorcher

Routers

Radial Router

Router Planer

PlateShaver

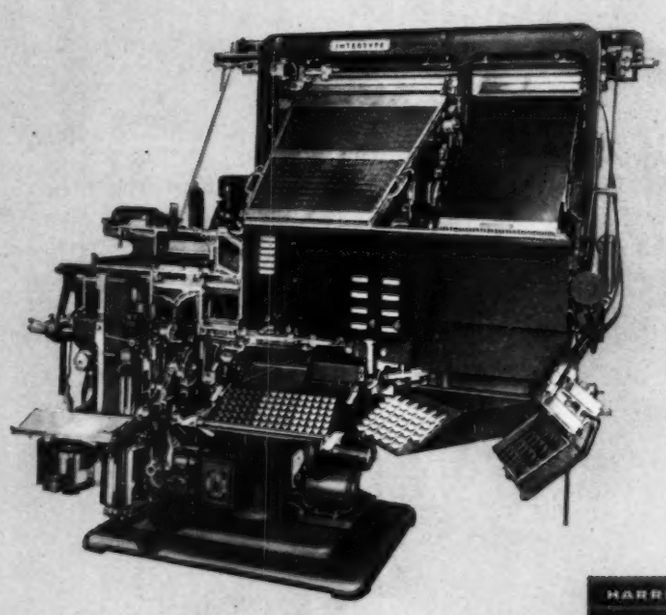
Full Page
PlateShaver

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

For More Information Circle 79 on Reader Service Card

Don't gamble... plan for profits with a new Intertype Mixer



With today's squeeze on profits *don't gamble* with obsolete or inefficient typesetting machines and methods.

If you are setting too much type by hand; if you are "cutting in" mixed composition; if you are changing too many mold liners; if you are setting white space by hand with quad matrices; if you are having too much "down time"; you play a losing game.

Plan now to save by setting complicated mixed composition on a modern Intertype Mixer. Remember, on an Intertype Mixer you can:

1. Set type from 5 point through 60 point Caps.
2. Mix as many as six different faces in a line at keyboard speed with advantage of continuous distribution.
3. Change magazine positions with power instead of push.
4. Eliminate mold liner changes with the six-mold disk and at the same time provide maximum overhang casting.
5. Quad lines and set white space automatically.

It's not too late to plan for a profitable composing room operation with *new* Intertype Mixers.

HARRIS INTERTYPE CORPORATION

INTERTYPE COMPANY

A Division of HARRIS-INTERTYPE CORPORATION

360 Furman Street, Brooklyn 1, New York

Boston, Chicago, Cleveland, Los Angeles,
New Orleans, San Francisco

In Canada: Toronto Type Foundry Company Limited, Toronto, Montreal, Winnipeg, Vancouver, Halifax

Intertype is a registered trademark
Set in Century family

For More Information Circle 191 on Reader Service Card